

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

█ thanks BN for the presentation and states an appreciation for habitat enhancement. She continues and states that while elders aren't interested in enhancement because they want things to stay the same, the way the world is going we will need this stuff so thank you.

█ states that it is his understanding that with habitat banking, there is no guarantee that future projects will be approved. I take it from this document that this is still the policy and that there are certain types of impacts that will be considered and not be approved.

BN confirms that this is correct; proponents of infrastructure projects must be able to demonstrate the projects impacts and how these impacts will be offset.

█ asks for confirmation that habitat banks do not skew the decision making process.

BN confirms that this is correct. Consideration is made for using the credits as offsetting but it does not affect the decision. The existence of a habitat bank is not a deciding factor on whether or not to issue an Authorization.

█ notes that before DFO makes any decision, they are required to consult.

█ asks if DFO's decision making process and the DFO program well-resourced or will changes to the *Fisheries Act* change that.

s.19(1)

BN states that he does not know, and does not wish to guess, what changes to resources will be made with respect to resources but did not expect that habitat banking resources will change.

JS states that if there are no further questions, we can conclude our discussions and break for lunch. We can still have informal discussions during lunch.

█ asks for confirmation of the goal for today's Information Session; i.e. informing, consulting? Will there be change to legislation?

BN states that the goal is that we have an existing habitat banking arrangement with VFPA and it will be expiring, so the idea is to make sure we inform what habitat banking is and that we intend on entering into a new habitat banking arrangement with VFPA.

JS states that HEP has been working with many communities in the delivery of its projects so it's an opportunity to say that this is the process we have been using and get input as to whether there are any concerns or ideas with the way we are doing this. We are very much interested in identifying ideas and projects from communities we are working with. It's an opportunity for us to improve or enhance what we are doing from your input. As I said before, this is one session, we will be following up with everyone to get further input, this is by no means a one-time opportunity to provide feedback. We'll be sharing a summary of everything we've heard today.

JS requests confirmation that it is okay to end the session. JS continues and thanks the participants for their contributions and that their time is appreciated.

<End of Session>

## **VFPA-HEP & DFO Consultation with Aboriginal Groups on:**

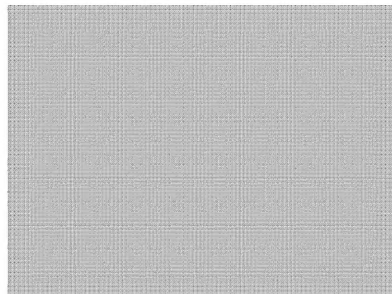
- VFPA-HEP's Consultation Process for Habitat Banking Projects (VFPA)
- Overview of Proponent-led Habitat Banking (DFO)

**Date:** Tuesday, October 16, 2018

**Time:** 9:00 a.m. to 1:30 p.m.

**Location:** Brentwood Bay Resort, Brentwood Bay

### **Participants:**



Jemma Scoble, VFPA  
Sinead Deery VFPA  
Charlotte Olson, VFPA  
Gord Ruffo, VFPA  
[Redacted] Hemmera

Byron Nutton, DFO  
Suzanne Thorpe, DFO  
Shona Smith, DFO

### **Agenda:**

- | <b>#</b> | <b><u>Item</u></b>   |
|----------|--|
| 1.       | Introductions  |
| 2.       | VFPA Presentation <ul style="list-style-type: none"><li>• Objectives of Information Session</li><li>• Overview of VFPA's Habitat Enhancement Program</li><li>• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li><li>• Project example: New Brighton Park Shoreline Habitat Restoration Project</li></ul> |
| 3.       | DFO Presentation <ul style="list-style-type: none"><li>• Requirements for Fisheries Act Authorizations</li><li>• Proponent-led habitat banking</li><li>• Habitat banking arrangements</li></ul>  |
| 4.       | Questions and General Discussion   |

### **Documents Provided:**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. Overview of Proponent-led Habitat Banking (DFO presentation)
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)



**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

**Summary of Discussion:**

Sinead Deery (SD) welcome attendees and invites MU to open the meeting.

██████████ welcomes attendees and acknowledges of importance of fisheries and habitat restoration, and of involving youth in these discussions.

Round of introductions.

JS opened meeting noting the meeting is intended to be a dialogue, an opportunity for VFPA to share information for to hear input, information and knowledge from attendees. She adds that VFPA is hoping that the session is interactive and useful, and requests that participants feel free to provide feedback and ask questions as they come up. JS outlines the content of the package of information provided.

JS reviewed and confirmed agenda with participants. JS speaks to the objective (slide 3) for VFPA is obtaining feedback to improve/enhance the consultation process for habitat banking projects.

CO provides an overview of the Habitat Enhancement Program, noting VFPA administers a habitat bank (regulated by DFO), Habitat Enhancement Program (HEP) is meant to be proactive, provide balance between growth and a healthy, sustainable environment. VFPA has had a banking agreement with DFO for the last 5 years.

██████████ - Referred to use of the word "balance" -- will the port be incorporating some of the previous development into finding that balance? Start taking progressive steps towards compensating for previous development (ie prior to 5 years ago).

CO - We generally focus on improving areas that were previously affected (ie log booms). CO notes that the presentation will touch on a few examples of what HEP has done, and the team is looking for input on potential future projects.

██████████ - how do you measure if there's balance between infrastructure today and a healthy environment? Thresholds? How are you measuring and confirming there's a balance?

CO- This is challenging. We only deal with port projects, not broader areas. We look at past/future development and opportunities to restore previously affected areas.

██████████ - You referred to a partnership with DFO - do you partner with NGOs as well (i.e., Pacific Salmon Foundation (PSF))?

CO- Yes, we look for those opportunities - this is one discussion of many. Have done some work with PSF related to eulachon on the Fraser. We find that projects are better when we partner, and so we actively look for opportunities.

██████████ - CO mentioned that there was a project that wasn't done because local government didn't want it (CO clarified Steveston). Lake Cowichan had vocalized that they disagreed with local government having that level of influence. We are asking if DFO can help local government change their mind.

CO explains that the municipality had other priorities for the area, so the port decided not to pursue the project. The port prioritized another project at that time.

██████████ - What were the other interests?

GR - Foreshore development plans (ie boat ramp)

CO - Usually we prefer when interests are aligned, but it can be difficult when there are so many parties are involved.

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

BN – DFO doesn't exercise that authority (to influence municipalities). When there are good opportunities for habitat we try to resolve interests between parties.

█ notes that it is disturbing "that a local government can veto a restoration project, when local governments are negatively affecting habitat by development in lower mainland".

█ joined meeting.

█ I understand the program, been working on it for 5 years, I am disturbed that local government can negatively affect habitat by development in lower mainland. They have a responsibility to understand that they have adversely impacted it – I'm looking for DFO to step up.

ST: there are new changes to the Fisheries Act, looking at planning exercises we used to be involved in, hasn't been part of our mandate since 2012 changes to be part of integrated planning we used to be and we have been reactive in the way we have looked at things, serious harm to fish, as a result, you are looking for responses, and we will likely be more proactive but haven't been given direction on that.

█ I think you can show leadership and extend yourself this way and say we want to discuss these things with you. That is being proactive.

ST: and we don't do that. One of the things I am looking for.

ST encouraged the group to "take advantage of opportunities DFO has to provide input. If we have lost that ability and you feel that, feel free to express it". s.19(1)

JS noted that on the particular project, nations spent a lot of time participating in consultation (providing input, sharing knowledge) and were supportive. It was also disappointing for people working on it for it to not advance. JS adds that it is important to consider this feedback and provide it to municipalities in the future.

█ – I have a question for DFO – when you talk about eelgrass being beneficial for salmon, are there specific varieties you are referring to? Do specific types of juvenile salmon like specific habitats? What type of juvenile does eelgrass benefit?

BN – Eelgrass is important for all kinds of things, for the ecosystem. BN notes that he is not sure of the particular eelgrass species.

█ – That's a broad statement.

CO – There's lots of work done in the lower Fraser.

█ provides additional information on benefits to salmon.

JS walks through slide 13 noting VFPA is looking for opportunities for new projects, to identify new sites, and working with First Nations on this. JS talks about ways of doing that (studies from nations identifying sites, or nations bringing an area forward for consideration).

JS talks about the Glenrose Tidal Marsh Project, noting it is more than just a tidal marsh/habitat enhancement project, it was also intended to address an existing issue with looting at the St. Mungo/Glenrose site. The need to protect the site was a priority for several nations and it was brought forward by First Nations, becoming a HEP priority.

JS discusses Aboriginal involvement and project identification by First Nations including the salt marsh restoration at Tsawwassen First Nation (log removal), and the Maplewood Marine

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

restoration project – a Tsleil-Waututh Nation priority. JS – we are looking to continue to take forward projects that are suggested/prioritized by nations.

■ – Are you willing to consider more strategic type projects that aren't physical? For example, Golder developed diking system that province uses. It could be updated, could work more closely with local governments about diking. Could design it in a way that is more beneficial for salmonids.

JS – definitely want to hear things like that from you. It might not fall within the program, but potentially could be a fit for another program in the port... We want to hear any ideas you have.

BN – some of my presentation later will speak to that question.

JS adds that in addition to Aboriginal groups sharing knowledge and input at the beginning of project identification, HEP gets technical information from First Nations such previous studies, and data. The process is intended to be a collaboration.

■ – do you have to apply through FLNRO?

GR – Yes, if it is provincial, we would apply for some sort of land tenure through FLNRO (like a license, lease)

■ – I'm interested in the monitoring process and results – seeing what that data looks like. ■ refers to the HEP tour that the Cowichan Nation Alliance attended noting there are many obstacles to be overcome as part of restoration (i.e Glenrose Project). It is interesting to hear more about that.

JS – this is an important point – an issue was identified and measures taken to deal with a geese problem at Glenrose. It is good to share information and hear what people dealing with similar issues are doing at other locations.

■ – it is tough to sit back and say [a project] is going to be beneficial. Those are large scoping words. To sit down and hear what happened (there's 3 schools of juvenile salmon in this period of time.) gives more context as to how beneficial it was in long term.

JS notes examples of post construction updates/reporting that has been shared with First Nations, i.e. GoPro video of fish at New Brighton was exciting, and a validation that things are working as intended. We will make note of your comment and can look into better ways of sharing/reporting out on how beneficial projects are.

GR provides additional information on the problem of grazing geese that eat the young plants. In larger projects, we see different problems than we see on smaller projects. GR talks about ways to respond/manage to issues that arise (i.e. effectiveness monitoring, remedial work).

■ – any set goals for that plan? Trying to reach a specific level? What is required (i.e., healthy water quality levels, good outcomes re juvenile salmon)? Or randomly monitoring?

CO – generally, an ecologist goes out annually with a structural engineer (looks for failure of the bank, etc.). Quantitative analysis is done to ensure vegetation is established in a productive manner. They prepare a report, compare across years, look into strategies to accelerate/prevent.

■ – the monitoring plan was developed when the program was young. So far, a lot of programs are plant-based, so they test how well plants are doing compared to other similar habitats.

s.19(1)

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

CO – we compare sites to local reference sites, like a local natural marsh. An important part of restoration is to have comparison sites in the area so we have a standard which we are trying to achieve.

■ – how do you know natural habitats are healthy? Just because it is natural today, doesn't mean it's healthy (compared to the past).

CO explains the standard methodology that has been used for a number of years, and is accepted by regulatory agencies.

■ – so far we have just observed fish using sites (i.e., not counting), we typically measure vegetation.

ST – it is up to proponents to come to DFO with a project. The proponent sets parameters on how they will measure. We do have requirements that there are indicators that show biological success. We want to know that water quality is comparable to that around the project, etc. Need to show success:

■ – I'm still wondering – what if water quality surrounding the project is not ideal?

ST – we wouldn't try to put a project in an area where there is no hope of success for good quality fish habitat, etc.

■ – that's my question – what is your standard? What is good quality habitat?

ST refers to projects that have already been done, noting good quality habitat on the Fraser. Restore capacity for habitat to function in perpetuity. New Brighton example is provided. We know that some locations are lacking a type of habitat. There are many factors to consider.

BN adds that he thinks LA's question is how do we know those are the right benchmarks? BN - There is a lot of research that has been done. We look at feasibility, what types of projects might work. The fundamental basis of scientific research – have a high degree of comfort that background research is right, and it guides what we do. Measuring if fish are fatter/healthier in this area wouldn't be done as part of a monitoring project like this.

s.19(1)

■ refers to their experience looking for numbers and benchmarks. She notes shellfish closures and contamination in the context of numbers/measurements. ■ - We are also adapting a lot as we go. Try to navigate that with the agency that provides those numbers. Looking at whether we can use the water for cultural reasons. Can't use the water when there are certain levels of bacteria – how much can people tolerate? Some species can tolerate it, some can't. She notes dredging and industrial development in saltwater areas and provides an example of Saanichton Bay dredging to put in a dock for larger vessels.

■ - Dredging was extensive and displaced habitat, impacted Dungeness crab, which aren't there anymore. This is a big concern for us. We have stories about how Dungeness crab got to that bay. Is it edible? That's what we are looking for. Indicator species (crab, sea urchin) are very important to us. Last season herring roe was severely contaminated, not sure where the contamination came from. Thought that it could have been ballast or sewer. We are not just looking for return of life, we want to eat it. Some First Nations eat geese. She noted a Geese cull involving municipalities, farmers, a whole bunch of people. Herd geese with kayaks so that they don't fly, then harvest. Breast meat is a food product. Concern that we have is that eelgrass is a signal to geese to come and get it. Geese always come at low tide for grasses to eat. Dredging kills off barnacles, which gets rid of the bacteria. Things like crab, barnacles, other cleaners are displaced. One of the Gulf Islands chiefs said while looking into the water (off one of the Gulf Islands) "at least your water is alive" (he saw crabs, other critters going by). What I like to see is that the water is alive.



**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

■ - worked with Sea Change on restoration projects – often see that industry who impacted the areas don't have a role in restoring the areas. Pretty absent, other stakeholders are really absent. What we can do is really limited unless people who impacted it are contributing.

CO – Provincially there have been past court battles over sites where industry is long gone or bankrupt, no funds to do the restoration project. We can only work with areas that the port has administration over.

JS – the more people see the benefits of working in partnership over these types of projects the better. It is very good for industry, [from a public relations /Corporate Social Responsibility perspective], to support these types of initiatives. It is good to see local residents connected to the stewardship component of HEP projects and the involvement of schools, etc. We and others are invested in the success of these projects. JS explains that for New Brighton there was a lot of publicity through the City of Vancouver, and people are actively using the space and are supportive of protecting and restoring the area. The more industry sees the benefits of being involved in these types of projects, the more they might consider it.

CO – if projects are developed on port land – we need to do studies, etc. to show there will be no impacts but it doesn't deal with past effects.

BN – from DFO's perspective, there are salmon enhancement funding opportunities, new legislation proposed which might give more mandate. But a key thing is that whatever we build now is being built in a responsible manner moving forward.

■ referred to a project severely impacting Tsartlip's estuary, where eelgrass was affected. Doing ongoing stream restoration and there are legality issues. Dam at a creek [name?]. Not until someone came and took a video with a cell phone of trout trying to jump over the dam did they understand how the dam was impacting it. Need those with money to take some level of responsibility.

CO – our funding comes from capital infrastructure at the port. We are building habitat in advance of port development.

■ - is the port willing to do offsets for projects outside of the lower mainland?

CO – is there an opportunity to explore something over here? CO referred to the agreement to DFO and the service area, but notes that VFPA is open to the possibility of projects on the island.

■ - I have some projects... Nanaimo River estuary hasn't been looked at for a long time. In 1998 I took part in an elders meeting where they were trying to get a log storage area removed. Elders said we used to get our food here, can't have canoe races here anymore. After a lot of discussions started the project. I finally went and watched a canoe race this spring, saw canoes racing where the logs used to be stored. Made me wonder if there could be some planning around that. HFLP had a mandate to look at log storage in waterways from south of Nanaimo to the southern gulf islands – planning for that would be interesting. Lake Cowichan has projects around the lake, affected by log storage (streams leading into the lake). These are some projects that we would be interested in discussing.

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■ looking at maps, don't see a lot on the Fraser River. I would like to see more focus on the Fraser River. KJ referred back to her earlier thoughts on dyking. KJ – we are very concerned about the Fraser River. The Lake Cowichan Chief is all about fish and fish habitat, and is concerned about this on the Fraser River. Would like more projects on the south arm of the Fraser.

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

CO- it is very challenging in the Fraser River. CO referred to a large proposed project called South Arm Jetty. Very large project (30 or 40 hectares, with significant benefits to the estuary). Agricultural land, farming, infrastructure makes it a challenge to navigate. We are interested in exploring any opportunities brought forward.

Clarifies that projects that have gotten to the design stage were advanced because there weren't issues that couldn't be resolved. There are hundreds of projects that were looked at during an earlier stage that may have been put on the shelf because of issues.

- I want to see more of the projects that aren't listed.

- there are projects not listed on Vancouver Island as well.

- I support these projects in general. The Fraser River is very important to us. I appreciate New Brighton park benefits Tsleil-Waututh Nation, etc. I just want to know more about projects on the Fraser River. KJ referred to 6 years of discussions related to log storage issues, where she was told it wouldn't happen but got it done. There are ways of doing things, of getting people in a room, having them understand interests etc. I understands there are other interests, but I think we can move through them.

GR - it takes a lot of resources and persistence.

- there needs to see more action [projects done] on the Fraser River:

GR - we have talked to municipalities about dyking. As they start to plan for what they are doing for dykes, we are talking about what they can do with dyking to protect/enhance habitat. We are also in touch with municipalities about sea level rise to explore options.

- A challenge that we always have is that we are looking for some discussion within the program regarding First Nations history and our way of life. Our history goes much further back, involves a way of life that didn't feed into permits. Some of our legacy, our stories about how people would travel up the Fraser and camp. Fish were being bought from First Nations right off their boats. My mum...women roasting ducks from marshland area. MU talks about teaching and legacy. Wants people to know that sea asparagus is edible, and that it provides habitat. It is not just animals that can eat it. Barnacles - are very important. I never knew as a child why not to step on barnacles, didn't know that they had a purpose. Looking at certain kinds of legacy projects, looking at inspiring young people to install eelgrass, inspire young people to be engaged in these projects. I wants to see incorporation of teaching/learning opportunities with youth as legacy parts of the projects - pictures, understanding the cultural portion, history.

<Break>

CO talked about New Brighton Park as an example project and highlighted involvement of First Nations.

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JS discussed how VFPA worked directly with First Nation to plan the consultation process, identify the Nations' priorities (i.e., ecological signage including traditional knowledge for education, cultural recognition).

asked what type of juvenile salmon were on slide 25.

- Chum.

JJ - when grass is planted, do you use predator netting?

- problem we have is geese grazing on the grass. After we added goose exclusion fencing, it is doing much better. Stuff along the side (shrubs etc.) hasn't been affected by predation. There was some drought with these shrubs due to super dry summer.

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

CO – we can't just build habitat and walk away. We have a maintenance budget to assist with the natural establishment of vegetation.

█ – how do you account for climate change? Do you predict what the area will look like in the future?

CO – many of our locations have coastal/tidal influence. We build it into the design. We look at coastal modelling. For example, will we see severe storms in the future? Work these considerations into the design. Need to think long-term with the design.

█ discusses how elevation is considered.

█ – after habitat is established, do the areas have a protected status so they are not developed in the future?

CO – areas are designated conservation under a land use plan. Any fish habitat is protected under the Fish Protection Act from future development.

█ I just wanted to make sure, it would be such a shame if it was not protected in the future.

CO- part of the project development is to ensure it's in an appropriate area.

█ [referencing New Brighton Park] It would be interesting to see long term changes on the current/flow in the area compared to how it was before.

CO talks about drainage. Had heard that there was a historic creek here. Weren't trying to replicate exactly what was there previously, tried to design something that would work and be stable in the long term.

FHEP presentation ends.

JS notes that VFPA will follow up to see if attendees have any thoughts about the process (i.e., what works/doesn't), or anything else the program should be thinking about that wasn't raised during the meeting.

JS turns the meeting over to BN/DFO.

Overview of Proponent-Led Habitat Banking

BN clarifies that he is not presenting on specific projects, but presenting on the policy that supports the banking scheme.

BN reviewed the FAA process/regulations. He noted that review/amendments to the Fisheries Act are going through parliament, could be changed if it passes. Proposal is to change the language, but shouldn't change the principle of protecting fish/fish habitat.

BN reviews basic principles of FAA process, residual serious harm to fish and offsetting any impacts.

█ referred to guiding principles (#1) that seem to be supportive of commercial fishery. Where do First Nations priorities fit in here? Local restoration priorities? There should be a separate guiding principle to offset in a way that supports First Nations cultural values.

BN clarified that #1 includes First Nations fisheries, and is not meant to preclude any type of fisheries.

s.19(1)

█ It should be more specific. And with #2 how do you "balance"? What does that mean?

BN clarified that the guiding principles are national principles specific to this process. Principles could change as part of review [of the Act]. If we are issuing an authorization for someone to do harm, we want to make sure we are counterbalancing/offsetting that harm. BN talked about the process of effects assessment, residual impacts and offsetting those

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

residual impacts. He notes that it is a site specific assessment, trying to understand impacts.

- Do you work with First Nations directly to understand impacts?

BN confirmed that DFO does work with First Nations to understand impacts. BN - There are 2 parts to habitat banking: presentation from port authority about building habitat prior to building projects requiring offsetting. Second part involves issuing of an authorization from DFO for an impact. There is consultation on all of the parts: what is the impact? what can you do to offset? One of the most important aspects of what we do, is consultation.

New Brighton Park was offsetting a specific development - which development?

BN clarified that New Brighton was not an offset for a specific development. BN - habitat banking means you are building the offset up front. At some point down the road, there might be a development that causes an impact and can use the bank. It is not a typical approach where you build habitat to offset a specific project.

- you use the term conservation a lot. Is this term in the Act around habitat banking?

BN - It is used in the policy document to distinguish between a development project and the offsetting project.

- I have concerns with that term. Aboriginal rights can be set aside in favour of conservation. Really New Brighton Park is not a conservation project, it's a habitat enhancement project. This is important in relation to aboriginal rights and title interests. I am concerned that the proponent can unduly sway the Crown in terms of habitat banking. I am concerned with people having a bank they can draw from, with construction down the road.

BN talks about the terminology of conservation projects. BN - it's not related at all to biology, someone chose the word to provide a delineation. You are right, it could be called habitat banking projects. Suzanne is taking notes and will pass this along as an issue.

BN - The Fisheries Act is changing. The new act is supportive of habitat banking - the way we are going to manage it now. Some of the terminology might change but the intent isn't changing.

ST - The proposal in New Act is to take elements of this policy and bring it into the new act. Habitat banking will be in the Act as a way of dealing with offsetting, whereas right now it's a policy but not in the Act. Then DFO will have a mandate to perform it.

- I'm very concerned about the concept of habitat banking, that it could be used to unduly sway the Crown to grant an authorization (if habitat is already banked).

s.19(1)

- we're very focused on an area, a specific project. I want to hit it at a strategic/innovative level. Do something about dyking at the south arm of the Fraser River. We are very connected to this land, water, resources... what I tend to see is scientists get focused on boxes that they can deal with. I'm talking about a broader area, fish that you have a mandate to affect, its several aboriginal fisheries. I need to make this statement very strongly. I really wants DFO to hear this, I won't be going away.

BN - all of those boxes aside, it's something that needs to be done. Can take it back to other areas of the department.

- as soon as we get a Harper type government in, all of our concerns will be sent to the back burner.

BN -we're trying to balance benefits of habitat banking (i.e., doing things up front) to make sure that down the road, when it is being used to offset, there is a really clear



understanding of the specific benefits of the banking project to balance the impacts of the project. There is language that says that having a habitat bank doesn't guarantee that you don't get an authorization.

asked for examples of projects where DFO has not granted an authorization.

BN referred to Fish Lake (Taseko). BN explained that he doesn't do authorizations anymore. BN's experience is that even if an authorization isn't denied, proponents often cut their losses earlier, so it doesn't come to denying an authorization.

- It is important for us to know that there are projects that we don't even see that don't go ahead for these reasons (impacts, etc.).

BN - this is one of the things that is being talked about in the new Fisheries Act. They are talking about a potential public registry. No clarity on how this works, but this type of input would be helpful for people working on this.

- the perception is that you approve everything.

ST - sometimes we may say no initially, but a proponent comes back with alternate plans that may work better. Do a lot less back and forth with projects than we used to. We have a much heavier professional reliance on consultants. We have regulatory staff that review the projects and apply standard mitigation measures to avoid impacts. Our reliance is on consultants as professionals to design a project to avoid/mitigate. This is the way that was chosen with the movement to serious harm... hopefully we see movement back to some elements of how the old program worked. ST notes that she would like to talk to KJ after the meeting in more detail.

noted concerns about Atlantic fish farms. Need to have native species enhanced and protected, not threatened. How could an extension (to the fish farm permit?) be given to that without consultation with those who rely on these resources. It is part of the identity of this coast. People are here for tourism, not here for Atlantic salmon that escape. MU discusses importance of having a balance, using balancing words.

BN - some time down the road, there may be a project that relies on benefit from the projects built today. Recognizing that sometime down the road that there may be a project that we're comfortable this will offset.

- The language in the Act is going to change. Duty to consult language is really missing from the content (slide 6). Language is exploitive. Calling it a bank but never going to account for a loss. Do we really know it will make up for that loss? Can science prove that? I've seen that missing component - consulting with First Nations. People are upset because people's voices are missed. It isn't enough to conserve the little we have left.

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- I'm concerned that there is going to be a project down the road. These projects are tied to a specific location, but you're still asking for us to accept an impact.

BN - DFO is doing consultation when the impact is proposed. Consultation for a FAA is a serious thing. In contemplation of issuing a FAA, or changing a project to avoid issues... this is the meat of what our program does. If we get to this point, we are consulting on the impact and whether all the avoidance/mitigation measures have been applied. Or are there others? In other situations we talk about what could you do to offset, but there is some uncertainty around it (i.e., is it functioning or not?). In this situation, the intention is that there is benefit from some certainty of whether it's functioning.

BN - Fisheries Act is changing, but this is not a focus of what we were hoping to talk about today. There has been a whole range of consultation around that change to date and more is planned. There are still opportunities to hear your comments around language etc.

There is specific language from policy documents around habitat banking that hasn't been the forefront around that. Can take that back.

referred to the concept of habitat creation. With New Brighton it sounds like it was more land based, but could you create habitat out in the ocean?

BN – This is not set in stone. Creating something new vs enhancing vs restoring. New Brighton at face value is creating new habitat (field to aquatic habitat). In reality, it used to always be fish habitat, so could consider it more of a restoration. Not something to worry about. Intention is that they are all ways to provide benefit.

- 2 points: 1. You can't create habitat, you can only change habitat. Concerned from this perspective, that you are displacing something to create habitat. Wouldn't mind having clarification on what does that mean to DFO.

- 2. I have concerns with habitat banking. I understand DFO's response. We need to be brought in on banking work to identify whether or not it is a good idea. DFO is saying that they are not consulting with First Nations until later when there's a project. VFPA is already consulting with us on habitat banking, but is it DFO's policy to not consult until there's a project?

BN – our legal consultation is as part of a permitting authority.

- they don't need authorization from you (prior to building the habitat banking project)? They can go and start digging?

BN – Usually not. For New Brighton Park, they were digging a hole in the park. The park wasn't providing a benefit to fish, now it is. It did not require a FAA.

- The New Brighton Park project was attached to a major water source that you are responsible for. This is an issue: I don't agree that DFO has no role at this stage, or that engagement is separate from consultation when changing an area of aboriginal habitat. This area was occupied and used. Consultation to us is needed when making those changes.

BN – we have been having conversations with the port, understanding that concern, part of the piece we did feel we had an authority to exercise is that we need an arrangement with the port to document that these are being built as part of the habitat bank. We are having that discussion to make sure that there is a linkage back, even if DFO is not exercising regulatory authority at that point. The port is making sure First Nations communities are not just consulted, that they are part of the process. That was the process that they just presented.

-I don't feel that we are being consulted here. We are talking about something that is a little bit uncomfortable for us. Aboriginal rights and title (under the Douglas Treaty) are perpetual. We have to do our utmost to preserve that, to preserve our relationship with the Crown. We need to make sure we are no longer fettering those rights, make sure those rights stay alive whether or not we are out fishing. [New Brighton Park is] a good example of restoration of an area, restoring closer to what it was like before. We are just worker bees, we don't have the same authority as some First Nation umbrella organisations that are looking at some of the legislative changes. I don't want DFO to see this as though [First Nations] have been consulted and everything is hunky dory. DFO should explore discussions with higher level First Nations organizations - knowing that this is happening would give me comfort. I am not comfortable with the language being used by DFO. They always preface discussions with "this is not consultation," we are here because we have a role to provide input etc. expresses discomfort with what is DFO is saying. She notes that the pacific salmon/Atlantic salmon issue (fish farms) is a bad example that is right in their face. - we would like some restoration of that, shellfish restoration. referred to

s.19(1)

existing issues about treating sewer, saltwater... it can't just be small First Nations who are saying this. Government agencies need to reinforce court decisions, not work around them.

BN – at the highest level, I'm hearing that DFO has a lot more work to do on a lot of fronts. We hear that a lot. I can't speak to these issues but can share your issues with others at DFO. We have talked about changes to fisheries act – this is happening at a whole other level, and there is consultation on that. The only reason we mentioned [the changes] today is because there are a few key concepts from the current language might change. Language on slides reflects the current language, current Act. I am not here to say we have solicited input on changes to the Act. Habitat banking isn't new, we have been doing it for a long time. The port has a habitat bank, and I want to understand what the concerns around this are. It is not intended this to be consultation on the overall system.

– if [the habitat bank] has been going on since the 90s we have not been included in a lot of those conversations. In light of reconciliation, First Nations communities should be included in decision making in our lands, waters, resources. Feels like someone is making up my mind already and saying that because we have done these projects already, we can keep doing them. This work, these conversations are really important, a lot of your information shared today I wasn't aware of. Would like to see what the decision making process looks like for offsetting (i.e., are decisions made based on biophysical impacts? monetary value?). The presentation had lots of high level terms, lots of variance, uncertainty. When presented with high level terms, minds can go to worst case scenario.

BN – Clarified the port's project (habitat banking) has been going since about 2012/2013.

– Referred to cumulative impacts in the region.

BN – the presentation is intended to be high level, more conversation might be needed.

– Referred to the mudflat in Saanichton Bay as a way of better understanding the saltwater environment. There could be a lot of information shared between projects here and the port. Hard to get at this type of information because there are so many different government bodies, so many parties involved (sport fishing, etc.). In the Saanichton Inlet, there has been no remediation done for the dredging [that occurred in the past]. Climate change, higher temperatures – need more information. Need a better understanding, so can be more open to the idea. Interested in it as a way of getting more information. Right now, there is some resistance to the idea of this.

CO notes that VFPA is looking to gather input on the work we are already doing.

JS – for the program and DFO, this is an opportunity to hear feedback and talk about how to move forward. Some discussions will have to be with DFO specifically. If we need to meet again together, these are things we can do. We [VFPA] is interested in working on projects together [with First Nations], developing relationships in the context of the program. For DFO/technical conversations, we could organize another session if it would be helpful. The intent of today was... to start a dialogue and establish an effective way of working. This is the beginning of a conversation.

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– makes a recommendation to involve First Nations in decision making, set goals together that are acceptable to First Nations. – The presentation referred to scientific evidence, but also need to think about consumption of fish (quality and taste of fish). What measures are we trying to achieve from a scientific and TK perspective? Should include TK in evaluation of projects.

JS – There has been lots of learning during the event this morning. We are starting this conversation completely open to suggestions like that. We have a high level of confidence in our technical people, but also understand that there are things we don't know and could learn. We are happy to talk about developing objective measures (like referred to). The

projects done recently were so much better because of the ways we worked with First Nations from the beginning. There is a tendency to separate technical conversations from other types of conversations. This is not the approach we are taking. We are talking about getting input from the very beginning, starting with the projects we choose. Also want to know how we implement some of these things, what it looks like [for each nation]. What is the best way to do this together and get where we want to go? We put a process up there as a starting point, and need help in defining and creating the path forward.

■ – part of the concern is addressed in the next few slides – how Indigenous people will be engaged in habitat banking agreements. So, if a proponent wants to obtain a habitat credit, they have to engage DFO?

BN – Habitat Banking Arrangements (p16) – with the port, there is a high level arrangement, which isn't specific to each project on the ground. The agreement is higher level because the port has several projects. It is a higher level agreement about how to manage, build and deliver projects.

■ – still have the issue that First Nations are forced into a pre-approval, pre-consultation environment. This isn't in relation to VFPA, it's in general. The Crown will say that they participated in habitat banking, so it's okay [as an offset]. But at the time, didn't have the context of the project. Referred to a steering committee that advises the port on this process, but First Nations don't know why these projects are coming forward. I want to know what projects are being put forward, pushed ahead of the others and why. I appreciate the work the port authority is doing. I'm impressed with the work we are doing, but I want to be part of the reason why a project is being selected. Not being engaged after a project has been decided on, and [being involved] in goal setting and evaluation. You need to be asking Indigenous communities – where do you want to be engaged in this process?

■ emphasized that the south arm of the Fraser River is most important for LCFN, fish and fish habitat. KJ wants to see strategic level things, innovative, small projects. ■ is willing to get in the room and convince people who are opposed to projects that need to be done.

BN – that conversation doesn't need to be constrained by the box of habitat banking.

■ – The terminology used in the presentation threw a curve ball. Whenever we deal with DFO there is an issue with the Douglas Treaty, the Douglas Treaty has never been recognized by DFO. It's like talking to a wall. DFO hasn't acknowledged it, now they want to consider it. Habitat banking is a way out of infringement. DFO is justifying infringement on Aboriginal and treaty rights – should call it an "infringement bank". Crown corporations have been managing or mismanaging resources. WM refers to terminology, and says DFO would get in trouble for this at his own political tables. It is a little disturbing. He points out that Indigenous engagement is at the very end of the DFO presentation – the last slide.

s.19(1)

■ – Indigenous voices are called in at the last minute, there is no real engagement. They do an awful job across all levels of government of good engagement. Good engagement requires a lot of work in communities. Imagine if we were one block over, hearing the views of the community? Not just one voice per nation. Organizations like you [DFO] need to engage with nations like they are diverse groups. I see it at the time. Why isn't my nation involved in restoration projects? We are saltwater people, and more often we are not involved in the work.

No additional questions/comments.

JS outlines the process for VFPA to follow up with attendees. JS will send out notes for review and welcomes an opportunity to come back and have further discussion (group or



with each First Nation). DFO can clarify how follow up/further discussion takes place with them.

BN – we will look at the notes. Next steps would be summarizing what we heard and providing a “first cut” of answers. What about a follow up meeting? A lot of issues are coming up today that are outside of my purview.

JS – [to BN] It is important to have a process to address what’s coming up. On behalf of VFPA/the HEP, we can commit to further discussions as part of HEP consultation. I think we need DFO to provide attendees with a clear process so they know where their input is going. It is a collaborative process today [VFPA and DFO], but there will need to be separate follow up from numerous departments in DFO.

BN notes that he needs a clear understanding of issues so he can engage the right people at DFO.

*<End of Session>*

## Smith, Shona

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**From:** Thorpe, Suzanne  
**Sent:** Tuesday, November 20, 2018 10:23 AM  
**To:** Nutton, Byron; Smith, Shona  
**Subject:** FW: Draft Meeting Notes from Sept 11 and Oct 16 Consultation Sessions  
**Attachments:** 2018-09-11-VFPA-DFO Consultation with Aboriginal Groups - Meeting Notes-for DFO review - Rev B.docx; 2018-10-16-VFPA-DFO Consultation with Aboriginal Groups - Meeting Notes-for DFO review - Rev B.docx

**Categories:** Follow Up

I don't know what you guys think but these aren't meeting minutes – they are a quasi-transcript of the meeting. We indicated to FNs that meeting discussions wouldn't be captured verbatim and this is what we have been presented.

I think that the meeting records should be:

- Generalities of topics discussed
- General concerns brought forward
- Follow up topics

This isn't how DFO would normally capture meeting minutes, except as internal notes.

Suzanne

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**From:** Ruffo, Gord [mailto:Gord.Ruffo@portvancouver.com]  
**Sent:** 2018-November-16 6:01 PM  
**To:** Nutton, Byron; Thorpe, Suzanne; Smith, Shona  
**Cc:** Olson, Charlotte; Scoble, Jemma  
**Subject:** Draft Meeting Notes from Sept 11 and Oct 16 Consultation Sessions

Hi Byron, Suzanne and Shona

Attached are the draft Meeting Notes from our Sept 11 and Oct 16 consultation sessions. Please review and provide your edits and return to Jemma for distribution to the Aboriginal groups.

Thanks

**Gord Ruffo P.Eng.**  
Senior Project Manager  
Habitat Enhancement Program



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9018 | CELL: 604.202.8022  
[portvancouver.com](http://portvancouver.com)

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## Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Monday, November 26, 2018 3:46 PM  
**To:** Nutton, Byron; Thorpe, Suzanne  
**Cc:** Ruffo, Gord; Scoble, Jemma  
**Subject:** RE: DFO - Action Items Update Request from August 22 - November follow up  
**Attachments:** 2018-08-22-03-600-VFPA-HEP-DFO Meeting Summary-Actions-UPDATED Oct 3-Rev1.docx

Hi again Byron & Suzanne, apologies for another email today.

In addition to my note sent earlier today regarding your input on timelines, VFPA is also looking for your response please on the below items in yellow.

- I believe Byron has already responded to #4 by email on October 31, thanks Byron. Further discussion is required in person on the Arrangement draft, and what the next steps are, so we both are clear.
- For #5 – for administrative purposes, we are still looking for DFO to acknowledge in writing the credit values that were presented & detailed with as-built drawings/reports in our 2017 Annual Report submitted to DFO in January 2018 for habitat constructed at New Brighton Park, I'd like to request this from you before the end of December if possible please. VFPA has a robust process for documenting post-construction, monitoring, and maintaining habitat credits – DFO acknowledgement of what VFPA has constructed, is an important part of the process that we have developed with you. Please let me know if what we are asking for is unclear, or you'd like to discuss further.

Thanks again both, Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

**From:** Olson, Charlotte  
**Sent:** Wednesday, October 03, 2018 11:52 AM  
**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; 'Thorpe, Suzanne' <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** DFO - Action Items Update Request from August 22

Hi Byron and Suzanne

As we approach the next few weeks of meetings with Aboriginal groups – I'd like to highlight a couple actions that are still with DFO please, and kindly request an update.

Per the attached Actions List from our August 22 meeting at VFPA, I've updated the items that are complete on the attached, and draw your attention to 2 open items for you.

Byron or Suzanne – can you please update on your items #4 and #5.

- For #4 – It would be good to know when DFO is anticipated to come back to VFPA with comments on the August version of the draft Arrangement that we sent you.



- For #5 – It is important for VFPA records that DFO acknowledge the deposit of the 2017 New Brighton Park habitat credits, as presented to you in our 2017 Annual Report – provided to you in January 2018. Past confirmation was issued by letter from DFO (via Holly Pulvermacher), it makes sense for you to do the same for NBP.

If you could kindly provide an update that would be appreciated.  
Thank you, Charlotte

PS – later this week, I anticipate Jemma can provide a further update on the meeting details for Oct 10 and Oct 16. Thanks!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

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pages 1062 to / à 1063**

**From:** Thorpe, Suzanne  
**To:** Olson, Charlotte  
**Cc:** Ruffo, Gord; Scoble, Jemma; Nutton, Byron  
**Subject:** RE: DFO - Action Items Update Request from August 22 - November follow up  
**Date:** 2018-November-27 12:16:20 PM  
**Attachments:** image001.png

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Hi Charlotte;

DFO will see you at the First Nations engagement meeting on Thursday, 29 November. As an interim response, Byron has been away this week; however, correspondence to address action item #5 will be sent to VFPA shortly.

Suzanne  
T: 604.666.3512

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**From:** Olson, Charlotte [mailto:Charlotte.Olson@portvancouver.com]  
**Sent:** 2018-November-26 3:46 PM  
**To:** Nutton, Byron; Thorpe, Suzanne  
**Cc:** Ruffo, Gord; Scoble, Jemma  
**Subject:** RE: DFO - Action Items Update Request from August 22 - November follow up

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Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

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**Sent:** Wednesday, October 03, 2018 11:52 AM

**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; 'Thorpe, Suzanne' <Suzanne.Thorpe@dfo-mpo.gc.ca>

**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>

**Subject:** DFO - Action Items Update Request from August 22

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If you could kindly provide an update that would be appreciated.

Thank you, Charlotte

PS – later this week, I anticipate Jemma can provide a further update on the meeting details for Oct 10 and Oct 16. Thanks!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



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Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

**HOLD FOR HEPDFO PRRO SESSION.txt**

**Subject:** HOLD FOR HEP/DFO PRRO SESSION  
**Location:** People of the River Referrals Office

**Start:** Thu 11/29/2018 9:00 AM  
**End:** Thu 11/29/2018 11:30 AM

**Recurrence:** (none)

**Meeting Status:** Accepted

**Organizer:** Scoble, Jemma

Bldg. #10-7201 Vedder Road  
Chilliwack, BC V2R 4G5  
Phone: 604-824-2420  
Fax: 604-824-0278  
Toll free: 1-800-565-6004

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## VANCOUVER FRASER PORT AUTHORITY MEETING NOTES

### VFPA HEP & DFO Information Session with Aboriginal Groups

Date: Thursday, November 29, 2018  
 Time: 9:00 a.m. to 11:30 a.m.  
 Location: People of the River Referrals Office, Building #10, 7201 Vedder Rd,  
 Chilliwack, BC, V2R 4G5

#### Participants

People of the River Referrals Office (PRRO): Vancouver Fraser Port Authority  
 Jemma Scoble  
 Charlotte Olson  
 Gord Ruffo

Lower Fraser Fisheries Alliance Fisheries and Oceans Canada  
 Shona Smith  
 Suzanne Thorpe

#### Agenda

- | #  | Item  |         |
|----|---|---------|
| 1. | Introductions   |         |
| 2. | VFPA Presentation   |         |
|    | <ul style="list-style-type: none"> <li>Objectives of Information Session</li> <li>Overview of VFPA's Habitat Enhancement Program</li> <li>Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li> <li>Project example: New Brighton Park Shoreline Habitat Restoration Project</li> </ul> |         |
| 3. | DFO Presentation  |         |
|    | <ul style="list-style-type: none"> <li>Requirements for Fisheries Act Authorizations</li> <li>Proponent-led habitat banking</li> <li>Habitat banking arrangements</li> </ul>  |         |
| 4. | Questions and General Discussion  | s.19(1) |

#### Notes

##### Meeting summary:

The PRRO informed VFPA/DFO of a new Federal Protocol Agreement that they are close to executing. It is a consultation and engagement protocol that outlines how the federal government will consult with the 16 Nations PRRO coordinates. The Federal Protocol Agreement process will be embedded in the existing SEA process and will be very helpful for leadership and members of 16 communities. It was noted that some agencies that aren't part of SEA, like MOTI, and that this may continue to be a challenge. However, at the provincial level PRRO is coordinating with a number of First Nations organizations on a



## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

shared decision-making forum with 4 different Provincial ministries (as a 3-year pilot program).

### <Review of agenda>

PRRO representatives advised that PRRO does not consider the meeting to be 'Consultation' as PRRO is not a rights holding body.

[*Additional note*: The above referenced statement is understood by VFPA/ DFO. The purpose of the meeting was not to engage in formal consultation (i.e., there is no formal regulatory decision being made under a federal Act) but to engage with First Nations to seek feedback on the Habitat Banking Arrangement and its associated proposed processes for continued dialogue and information sharing].

### <VFPA presentation>

VFPA discussed the purpose for the meeting, which was to:

- Share information on VFPA's consultation process used for delivery of habitat project that are proposed for the VFPA habitat bank.
- Obtain input on VFPA's consultation process used for habitat projects.
- Provide information on how habitat banks are used to offset infrastructure projects.

Discussions were held with regard to the areas in which VFPA has jurisdiction (slide 8). It was noted that the Harrison River was an example of a potential habitat restoration area/opportunity which is located outside of VFPA jurisdiction but that may be interconnected/linked to VFPA jurisdictional areas. [*Additional note*: and therefore may be appropriate to consider for habitat restoration opportunities].

The former VFPA/Provincial Head Lease was discussed and VFPA noted that some projects are proposed within the Provincial area on the North Arm of the Fraser River (e.g. ex-Head Lease Area), and that the North Arm is heavily industrialized. Clarity was provided regarding provincial jurisdiction – that that provincial land includes the river bed in the area. Referencing the map on slide 8, VFPA also advised where federal/ provincial/ municipal lands are in relation to this area. Concern was expressed by PRRO regarding the lack of improvements on the North Arm and in management of the Fraser River.

VFPA explained that in terms of projects that the City of Richmond has partnered and been engaged on the South Arm Jetty Project. Richmond's interest is that they are a city that is located below the ocean's high water mark, and with sea level rise, they are looking at long term opportunities to protect the city. As well, the Glenrose Tidal Marsh Project was discussed as an example of VFPA advancing a First Nations priority project.

A question was asked regarding how fisheries productivity is considered given that it is hard to quantify. VFPA explained how increases in productivity can be demonstrated. As a proponent, VFPA needs to show there will be measurable fisheries benefits in advance, and prove this out during post-construction, comparing restored habitat to the existing conditions.

A follow-up question was asked about whether or not habitat projects consider all species of fish. VFPA confirmed that habitat projects target improvements for all aquatic species, not just salmon, and that the projects target multi-ecological functions.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Eulachon, a federally-listed Species at Risk, was discussed after there was a query about whether or not VFPA was working with the Species at Risk program. VFPA responded that they recently contributed to programs and studies on the Fraser R, including LFFAs work on eulachon. DFO explained that the Species at Risk program is another unit in DFO's Ecosystem Management Branch, and that if there was a proposed banking project that her team was looking at would provide productivity benefits to eulachon, they would coordinate and discuss this with SAR program staff. A further note was made by VFPA regarding Southern Resident Killer Whales (SRKW), also listed, that critical habitat is part of project considerations, specifically related to any activities such as dredging in such areas, and that permitting is required.

With regard to the proposed phases of VFPA habitat project delivery and its associated consultation process, it was asked how VFPA determines who is consulted. VFPA explained their process includes general engagement on HEP (as a program) as well as consultation on specific projects.

There was discussion about project maintenance costs. VFPA explained that project objectives include ensuring that projects function for the long term and that they are as maintenance free as possible. VFPA explained there have been many lessons learnt over the years of completing restoration projects and provided an example of Canada geese feeding on young marsh plants and having to then snow-fence off the areas to exclude goose access until the marsh plants establish. VFPA advised that some habitat has to be managed over the short term. VFPA has a budget for this, understanding that maintenance costs will somewhat depend on the project and its size. It could be 0-10% of the overall project delivery cost. If designed, constructed, and maintained properly VFPA indicated that project sites should not require long maintenance requirements (e.g. >5yrs).

DFO added that habitat banking projects are completed in advance (of any infrastructure project) and that annual monitoring is required. The monitoring results are reviewed by DFO. If the site is functioning and self-sustaining then monitoring requirements may be reduced. The whole purpose is to build sustainable projects, so if the project is not performing, it can be identified early and addressed.

A comment was made regarding the historic impacts of port activities. There was concern that VFPA would never be able to do enough to address all the past damages. There was discussion that addressing historic impacts for every Nation within the port's jurisdiction would be very difficult but that one the benefits of the banking program is that habitat is created as a benefit now, as the habitats are not being used (right away) to offset an infrastructure project. It was acknowledged that there has been a historic loss of streams and wetlands, from a variety of historic development in the Fraser River estuary.

A comment was made regarding the change in terminology with use of "offsetting" and DFO noted that it replaces the terminology 'habitat compensation'.

VFPA was asked to clarify how much is being spent over next 10 years on banking projects. VFPA responded that there is no committed spending in place, but there are priority projects identified for the habitat bank. VFPA's habitat bank is funded as a capital program with a budget in the multi-million dollar range with no time restrictions on it. VFPA advised that habitat restoration projects take a lot of time to complete (planning to completion of monitoring) and that VFPA has approximately \$10 million over the next 4 years, to deliver on current priority projects.

RE: New Brighton Park project:

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

- Historic fill was placed in the NBP project area from historic upland construction and development activities within City of Vancouver.
- Juvenile salmonids, including coho, have been observed using the constructed lagoon. VFPA has Go-Pro camera video footage of salmonid use of the area.
- DNA analysis has not been undertaken to determine what designable unit the salmonids are from; however, VFPA is interested in exploring this. Participants noted that it would be good to see what stocks are using these areas as there is a lack of information in terms of juvenile salmon use of estuaries, especially for Chinook. Burrard Inlet is considered to be a vital estuary and there is a lack of information on fish populations. DFO/VFPA were advised that there are DNA banks for all 25 types of sockeye on the Fraser and that since DNA testing is now more affordable now it should be good considered for the foreshore habitat projects that VFPA is completing (permitting dependent). New research from UBC is indicating that juvenile salmon use estuary more than previously thought. This information may help further develop the knowledge based regarding species of conservation concern, as well as to leverage funding.
- VFPA advised that NBP cost approximately \$1.5M for construction, and overall \$3M for full delivery.
- To complete the project about 7000m<sup>3</sup> needed to be disposed offsite due to contamination. The contractor also created berms in the park utilizing the clean materials. Soil and groundwater analysis is completed early to determine contamination levels. This is a driving factor for some projects as disposal costs are high. For NBP, 20 boreholes were drilled; soil and groundwater testing was completed ~ 2 years before construction.
- The creek outlet to the lagoon is from a City of Vancouver storm main overflow/diversion. It has no fisheries values and fish-access is limited due to its limited connectivity/water flow and grade so the 'creek connection' was not meant to be for fisheries access. The creek is a park feature connection that the City asked for as part of the Renfrew Revitalization Project. Within the wetland, the aquatic species are salt-water species; freshwater flows from the constructed creek are very low. The general understanding of the Renfrew Revitalization Project is that it provided opportunity for day-lighting a portion of the upland stream features and some storm-water attenuation.

### <DFO presentation>

DFO advised that the *Fisheries Act* is going through the review processes for legislative change and that the currently proposed new Act is with the Senate. There is no update regarding the timing of process completion but it is in its second reading. It is anticipated that, if accepted, Bill C-68's Royal Assent would be by June 2019, but this is not confirmed and it is dependent on parliamentary process. DFO is not expecting huge changes to policy, but there could new guidance habitat banking or the process may become a regulated process – with monitoring requirements.

VFPA commented that there are requirements for monitoring of VFPA habitat banking projects, per our current Agreement with DFO.

DFO also noted that it is anticipated with the revised Act there will be a transition back to HADD, possibly coupled with serious harm terminology. Feedback from Canadians during fisheries review was incorporated into the new act and as a result, it is anticipated there will be program and policy changes that take into account the lost protections and modern safeguards needed to protect fish and fish habitat. DFO added that the Fisheries Protection

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Program is already moving to develop an integrated watershed planning unit that will be more involved in land-use type processes.

During the presentation a question was asked about what chemical or biological manipulation would be. DFO advised that so far, it has not been contemplated for habitat banking. Chemical or biological manipulation is a potential option under the offsetting policy but it would be completed as part of a major project being undertaken, or where no other options exist. As an example, this could be the development of a fish hatchery.

There was some discussion regarding the Brown Creek wetland development. The removal of anthropogenic barriers to fish migration was also discussed including dam or culvert removal (streams daylighting). Habitat creation was discussed and the example referencing NBP, which created habitat out of an area that was land based. The Brown Creek wetlands are also an example of habitat 'creation'. For that project and others, DFO's Resource Restoration Unit works with partners to create new fish habitat, and there are funding programs available for interest groups and First Nation's organization to apply for funding for this type of work (e.g., Recreational Fisheries Conservation Partnership Program, Coastal Restoration Fund).

A question was asked if credits are transferable between locations. DFO advised they probably wouldn't want a development project in Vancouver harbour to be offset by a offset (i.e., conservation/ restoration project) on Vancouver Island.

A follow-up question was asked regarding whether or not the area of coverage is determined from habitat as an input and output (for example if you built 100m<sup>2</sup> of habitat and the project physically impacts 100m<sup>2</sup> but has downstream effects, how is that calculated? DFO advised that when habitat credits are placed in a bank, it is based on the straight up credit or area in m<sup>2</sup> built. When DFO assesses impacts in relation to a proposed project it is at that time that the Department may consider other trade-offs for impacts or different methods to calculate productivity. There tends to still be a hierarchy for looking at offsets with the use of like for like for like being easiest to account for, then like for unlike. DFO considers productivity and how it is accounted for. It is the responsibility of a Proponent to come with plan and DFO would negotiate the values to develop an Authorization or other agreement from there.

A question was asked regarding ratios and how they are applied. DFO responded that the under the new Act there may be additional guidance or policy on this but that for the most part DFO looks at available research on productivity and productivity values and uses national guidance on this.

As follow-up question it was asked if, at end of the negotiations - at the Proponent's end - whether or not the input/ output of habitat is equal or whether or not it is project dependent. DFO advised that it is different for each project as it depends on the project scope. Some examples were provided and there was discussion on the value of the habitat being impacted, whether it is entirely lost or just some capacity reduced. As well, DFO may have to consider whether or not water levels are affected and whether or not fish have access to areas in critical times of the year. DFO explained that the habitat assessors rely on the data presented and follow program guidance and 'rules of thumb'. Assessors generally try to use established productivity science for their analysis. There was some further discussion on credit values for "opening up a whole bunch of upland habitat" area and DFO commented that the value of credit given would not be for the habitat that already exists but there may be some form of credit given to the removal of a structure preventing access.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Consultation was discussed and a question was asked about whether or not DFO delegates the procedural aspects of consultation to the Proponent. DFO responded yes and no, that there is some negotiation on it but that DFO consults when making a regulatory decision. On the VFPA-DOF Arrangement, the undertaking is more engagement than consultation as there is no legal authority being exercised in making a decision. VFPA also advised that they are looking for input on the processes for engagement and consultation and that VFPA is undertaking consultations for each banking project. DFO added that currently, in the process, the stage is considered to be "early engagement".

The process for credit calculation was discussed as well as how it is documented. DFO explained that the process is probably most applicable to large-scale proponents having larger land management areas. DFO has 4 current regional arrangements (VFPA, TimberWest, BC Timber Sales, Dept. National Defense). *[Additional note: Small Craft Harbours holds a national Arrangement]*, and several municipalities (and others) have shown a high degree of interest in developing habitat banks].

The current VFPA/DFO agreement (renewed as an arrangement), has been in place since 2012 and VFPA/DFO are meeting with PRRO because DFO is renewing the agreement with VFPA for continued use of the bank.

A comment was made that there were questions and concerns regarding the *Fisheries Act* during the Fisheries Act review process that were never addressed from an Indigenous perspective and that the feedback process was too fast. DFO explained that explained a lot of Indigenous organizations and groups submitted similar submissions and that specifically related to the 'Section 6' factors there were a number of items recommended for change, including cumulative effects, consultation and use of a precautionary approach. As far as DFO is aware all of the recommendations have been considered for incorporation into the new Act. As well, there is likely to be a strong indigenous voice as the current government is extremely interested in pushing the reconciliation agenda forward.

A comment was made regarding the amount of development within First Nation territory. The new federal protocol has language around engagement and is fairly general, but First Nations may have the capacity to properly engage on issues, and understand that there is a responsibility to move forward with the federal government. Specifically the LFFA is very entrenched in federal consultation. At the Tribal Council level, a cautious approach is being taken. It was noted that some work is being undertaken through the federal consultation network, specifically with Angela Stadel, Manager Consultations, Strategic Policy at DFO. There was general support to continue such actions. It was noted that DFO is expanding its consultation teams, but there is also concern regarding consultation fatigue.

### **DFO made a commitment to ensure that FPP staff are informed about the federal consultation network.**

There was some discussion regarding the status and timing of signatures for the Federal Protocol Agreement, which represents the first of this type of agreement in western Canada (as far as participants are aware). Funding is still being considered. There was subsequent discussion that the PRRO could assist DFO with informing First Nations of the legislative changes and regional organizational changes as these come about.

Discussion on the upcoming VFPA-DFO Arrangement centered on the term of the renewed agreement. VFPA advised that the former agreement was 5 for years and was extended by DFO over the last 2 years; it expires March 2019. VFPA has been working on process with



## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

DFO about what the new agreement looks like. The intent is to have a 10-15-year time frame and to execute the arrangement in Q1 2019. DFO also noted that the arrangement includes a 5-year agreement review clause.

DFO confirmed that the other banking agreement renewal will very likely to occur after new Act comes into effect.

DFO added that there will be other points of engagement with First Nations when new policies are being contemplated. Once legislation changes, policies also have to be modified to reflect the changes. Discussion with Indigenous groups could pertain to regulations, for example, like that for the information requirements and timeline regulations put into force, or would be if habitat banking is contemplated as a new regulation. All proposed regulations require consultation. So, DFO is certain there will be continued be engagement and consultation on policies under a new Act.

A comment was made regarding input on the new policies, specific to productivity. DFO advised they are interested in any input, feedback and ideas about productivity and how it could be measured.

Additional meetings were suggested when the DFO-VFPA arrangement is in place, and there is further movement on the Federal Protocol Agreement. A workshop was also suggested.

Additional information was provided from First Nations that there are concerns regarding the health of and access to marine aquatic species, specifically clam beds, noting there has been cultural losses for communities like Semiahmoo. VFPA responded that there has been interest from Indigenous groups on VFPA hosting a clam bed workshop and this is something that is being considered for 2019.

VFPA was asked about their involvement in flood management, noting it is an unfunded process and is hard for First Nations to participate. VFPA's responded that their Environmental Programs are working on flood management and confirmed that sea level rise is considered in coastal engineering designs for each habitat project that VFPA undertakes. VFPA uses best available science and complies with, or exceeds, provincial guidelines. Habitat is built to be resilient with the elevation range species are able to survive at.

A past meeting with Port directors regarding navigation and a longer term plan around Harrison, related to a transfer station which had implications for fish and fish habitat was discussed. It was explained that First Nations have vision as Indigenous people, about what foreshore would look like, how water flows and comes back, river cycles, fish species seasonality, etc. A concern was raised that the current fisheries window is based on interior Nicola Thompson Coho but that interior Coho are entirely different from Lower Fraser Coho in run and spawning timing as well as incubation. Another concern raised was related to dredging near, or of, eulachon spawning grounds. PRRO/LLFA interests are to look after all the life forces in First Nations territory as well as meeting objectives that are based on cultural traditions.

Recommendations were made as follow up from the meeting:

- It was suggested VFPA consider the opportunity of funding and participating in the foreshore management symposium. From an Indigenous perspective, there is a high importance on the need for a long term foreshore management plan that would help resolve jurisdictional (municipal) challenges and provide solutions to managing the foreshore. It was also suggested VFPA and others tackle known issues such as



## **VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

flooding, water retention, navigation, dredging, and gravel removal. A like-mindedness document could come out of such a symposium.

- The Fraser Watershed Restoration Initiative was mentioned as well. The initiative has involvement of a number of ENGOS. The need for assembling, for example a \$500M fund for the entire Fraser river watershed has been proposed – a very ambitious, far-reaching and exciting initiative that PRRO would support participation in.
- VFPA advised that there is a large scope of work the Habitat Enhancement Program/team is involved in and it includes a number of initiatives through their different departments.
- The People of the River conference was brought up as a two-day event that could provide opportunity to look at what people are doing in the territory. It was proposed that VFPA/DFO/PRRO could present to the communities and also hear what is going in First Nations communities. A statement was made that often people take ITK and use it but don't report back to knowledge holders/community so the conference could represent a chance to bring it back to communities, full circle.

**Summary notes from the meeting were requested and VFPA/ DFO committed to providing high level summary notes to participants and interested First Nation organizations/ groups.**

### **Documents provided**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. DFO Presentation - Overview of Proponent-led Habitat Bank
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

### **Note taker**

Jemma Scoble

## Smith, Shona

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**From:** Thorpe, Suzanne  
**Sent:** Monday, December 10, 2018 3:27 PM  
**To:** Nutton, Byron  
**Cc:** Smith, Shona  
**Subject:** VFPA Consultation Record of Discussion (2018-12-10 meeting)  
**Attachments:** 2018-10-16-VFPA-DFO Consultation with Aboriginal Groups - DFO\_revised\_SUMMARY.docx; 2018-10-16-VFPA-DFO Consultation with Aboriginal Groups - Meeting Notes....docx

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Byron/ Shona;

I am sending you the DFO-edited version of the Record of Discussion for the October 16<sup>th</sup> meeting. Please review/ comment.

I also have a marked up "in-between" version but this is the final and you should have the original (but I've reattached it). Please review. Since the Port felt fairly strongly the transcript-type approach was reasonable, I know their staff will be looking for things that we neglected to include so I have tried to ensure I've captured specifics that were said that may be relevant to Aboriginal Rights and Title. I tried to be thorough, but still pare everything down to just the salient points.

This was the long 14-pager of records. The Sept 11<sup>th</sup> meeting was only 7-pages so should be easier to capture. I can do this asap – based on this last one it will probably take me most of day tmo to finish (I know that seems ridiculous but this one took me a WAY longer time to revise than I originally thought it would!).

Let's discuss so we can get these off to the Port asap!

### Suzanne Thorpe

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
Government of Canada/ Gouvernement du Canada  
200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512

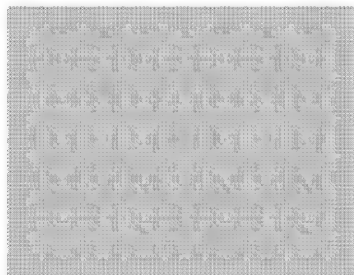
**VFPA-HEP & DFO Consultation with Aboriginal Groups on:**

- VFPA-HEP's Consultation Process for Habitat Banking Projects (VFPA)
- Overview of Proponent-led Habitat Banking (DFO)

**Date: Tuesday, October 16, 2018**

**Time:** 9:00 a.m. to 1:30 p.m.

**Location:** Brentwood Bay Resort, Brentwood Bay

**Participants:**


Jemma Scoble, VFPA  
 Sinead Deery VFPA  
 Charlotte Olson, VFPA  
 Gord Ruffo, VFPA  
 \_\_\_\_\_, Hemmera

Byron Nutton, DFO  
 Suzanne Thorpe, DFO  
 Shona Smith, DFO

**Agenda:**

- | <b>#</b> | <b><u>Item</u></b>  |
|----------|---|
| 1.       | Introductions   |
| 2.       | VFPA Presentation <ul style="list-style-type: none"> <li>• Objectives of Information Session</li> <li>• Overview of VFPA's Habitat Enhancement Program</li> <li>• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li> <li>• Project example: New Brighton Park Shoreline Habitat Restoration Project</li> </ul> |
| 3.       | DFO Presentation <ul style="list-style-type: none"> <li>• Requirements for Fisheries Act Authorizations</li> <li>• Proponent-led habitat banking</li> <li>• Habitat banking arrangements</li> </ul>   |
| 4.       | Questions and General Discussion  |

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**Documents Provided:**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. Overview of Proponent-led Habitat Banking (DFO presentation)
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

## Summary of Discussions:

An overview of the Habitat Enhancement Program was provided by VFPA. VFPA has had a banking agreement with DFO for the last 5 years and the purpose of the meeting is its renewal.

<VFPA presentation>

A question was asked regarding the word "balance" and what that means to VFPA; whether the port intends to incorporate previous development into finding balance? Clarity was also sought about measuring such balance between infrastructure today and providing a healthy environment, specifically referring to measuring thresholds and confirming "balance". VFPA responded that they generally focused on improving areas that were previously affected (e.g., log debris from booms) and that they consider past/future development and opportunities to restore previously affected areas in order to try to balance impacts from development.

A question was asked about the types of partnerships that VFPA forms with organizations, aside from the habitat banking partnership with DFO. VFPA responded that they have many partnerships and they actively look for opportunities to partner with others. As an example, VFPA pointed to work with PSF related to eulachon on the Fraser.

Comments were made regarding municipal projects, and the level of authority that VFPA and DFO have over such projects when First Nations have concerns about them. VFPA indicated that they try to align with municipalities, when possible but that there are often other factors and priorities that are taken into consideration. DFO advised that they don't have authority over municipalities per se, but that when there is opportunity for habitat restoration, that there is effort to try to link and resolve interests between parties.

Concerns were raised regarding local government allowing effects on habitat due to development, and a desire for DFO to address it. DFO responded that with the new changes to the *Fisheries Act*, there would be opportunity to be (re)involved in integrated planning processes, rather than just considering serious harm to fish, which is a reactive and legislative approach. DFO encouraged engagement on the *Fisheries Act* review.

Additional note: many municipalities have their own environmental departments and by-laws and regulations to support environmental protection within their land boundaries. DFO reviews municipal projects that are likely to result in serious harm to fish or fish habitat but these only account for a small percentage of projects that are undertaken. The province of BC also has regulations that may pertain to municipal projects.

Advice was given to VFPA and DFO that project monitoring (data and results) is of interest to First Nations, as well as determining what obstacles are needed to be overcome to enable a restoration project (e.g., dealing with geese issues at Glenrose). It was also indicated that project monitoring needs to be reported with context of the long term benefits and indicator targets (e.g., reports of fish). VFPA agreed and indicated that post construction updates and reporting is important and advised that this information is shared with interested First Nations. VFPA advised they will continue to improve on the reporting and sharing information.

Concerns were raised regarding monitoring undertaken on restoration projects. There is a need to understand what monitoring is being undertaken and for what purposes.

There was broad discussion about the quantitative analysis and qualitative analysis undertaken to support VFPAs restoration projects. VFPA indicated that monitoring results reports are prepared each year and that measures are taken to accelerate the recovery of

habitat and prevent any impacts to restored habitats. To date, VFPA's monitoring has largely been based on standard methodologies and generally, plant-based indicators. There is opportunity to modify the program in place and consider other targets and factors as the program develops. DFO indicated that the habitat program is proponent-led so the indicators and measures are generally proposed by the proponents for acceptance by DFO, and that proponents are responsible to show restoration success prior to the project being accepted for use in a habitat bank as credit.

Concerns were raised regarding project placement (location) and the surrounding conditions (e.g., water quality issues). There was discussion about the choice and establishment of projects, and ensuring projects are located where there is a strong likelihood of success and/or in addressing habitat that is lacking in certain areas, or other limiting factors. As well, VFPA and other agencies consider project benchmarks. This relies on research regarding project feasibility as well as other studies. VFPA advised that there is a fundamental basis of scientific research needed and a high degree of comfort that the background research is right, as it guides what projects are technically feasible.

Concerns were raised about shellfish closures, contamination and the use of water for cultural reasons, as well as concerns about levels of bacteria and its resulting effects on people. Dredging and industrial development concerns were also raised.

The importance of indicator species (crab, sea urchin) to First Nations was brought forward, as well as the need to ensure sustainable food-based ecosystems to support First Nations food fisheries and rights to harvest. The water being "alive" is an important concept.

Concerns were also raised regarding industries that cause impacts and those industries not having a role to restore/ rehabilitate the areas used. VFPA acknowledged this, but also indicated that they can only address areas within which the port has administration. VFPA discussed the positive merits of working in partnership for restoration projects and advised about how they are trying to set positive examples of successful projects with municipal and public support that other industries can consider in their restoration efforts (e.g., New Brighton Park). VFPA discussed the projects developed on port land and advised that studies are completed to ensure that impacts are avoided as best as possible. VFPA noted that the new projects do not address past effects, per se, but moving forward through the Habitat Enhancement Program they are ensuring that any new impacts are fully mitigated and/ or offset. DFO advised that with regard to past impacts, that the federal government has salmon enhancement funding opportunities available and that the new proposed legislation and upcoming funding opportunities may result in an increased mandate for undertaking additional restorative work.

A concern was raised about a project severely impacting Tsartlip's estuary, where eelgrass and fish passage across a dam were/are purportedly affected by stream restoration works. First Nations expressed that those proponents with funding should have some level of responsibility for these types of projects.

VFPA indicated that their main source of funding is from capital infrastructure at the port and that they are building habitat in advance of port development.

There was discussion on the willingness and capability of VFPA to complete offsets/ habitat banking outside of the Lower Mainland and VFPA indicated that they would be open to consideration of projects within their service area, and on Vancouver Island. First Nations would like to have some projects considered near the Nanaimo River estuary and in the Fraser River (specific to the South Arm). Further engagement will be needed to flesh out potential considerations and understand what projects First Nations would recommend. VFPA advised that they are considering opportunity for a large proposed project referred to as the "South Arm Jetty", which may have potential restoration opportunity over 30-40ha



but that as with any project, there are challenges due to land use and other infrastructure limitations.

First Nations requested review of project ideas and recommendations that are not currently listed by VFPA, and broadly indicated support for restoration projects in general. There is a desire by Indigenous groups on Vancouver Island to specifically consider proposals for projects on the Fraser River. Concerns were also raised about log storage/ removal, dyking. VFPA advised that they have discussed dyking issues with some municipalities and considering if there may be opportunities to protect/ enhance habitat, as well as consider implications due to sea level rise.

First Nations discussed the challenges in bringing forward discussion on First Nations history and way of life. Their history dates far back and their legacy defined through stories about how people would travel up the Fraser and camp; and this includes stories of how fish were bought from First Nations right off their boats, and of women roasting ducks harvested from local marshland areas. First Nations wants people to know that sea asparagus is edible and that it provides habitat. The interconnectedness of species and habitat is important and has purpose; there are food web linkages, for example, from barnacles to other animals. A high importance is place on teaching and legacy. There is a desire for certain kinds of "legacy projects", to teach others and leave a legacy for young people via engagement in these projects – through pictures and through understanding their culture and history.

<Break>

VFPA discussed the involvement of First Nations in projects and the consultation process undertaken to identify priorities (e.g., for New Brighton: ecological signage including traditional knowledge for education, cultural recognition).

VFPA also discussed the need for maintenance and monitoring when habitat is built.

There was an inquiry about accounting for climate change and VFPA advised that it is addressed in the design phase, especially since most of their habitat restoration is located in areas having coastal/tidal influence. A follow up inquiry was asked about the protection of restoration habitat(s) after they are established. VFPA responded that the restoration areas are designated conservation under a land use plan. There are protections in place overall for fish habitat, per the *BC Fish Protection Act* and the federal *Fisheries Act*.

<DFO presentation> "Overview of Proponent-Led Habitat Banking"

DFO advises that they will be presenting information on the policy that supports the habitat banking policy as per current legislation. DFO noted that the *Fisheries Act* review and possible amendments are in progress through Parliament but that while the language of the Act may change, the general principles of protecting fish habitat are unlikely to change and there is still expected to be habitat banking defined in the Act.

A comment was made that when referring to guiding principles (#1) that they seem to be supportive of commercial fishery. Questions were asked regarding "Where do First Nations priorities fit in here? What are the local restoration priorities?" A recommendation was made that there should be a separate guiding principle to offset in a way that supports First Nations cultural values. DFO clarified that the guiding principle (#1) includes First Nations fisheries, and is not meant to preclude any type of fisheries.

A follow up question was asked regarding guiding principle #2 regarding how offsetting measures would "balance" project impacts and what that means. DFO responded by clarifying that the guiding principles are national principles specific to the offsetting guidance and process. If DFO contemplates issuing an authorization for serious harm to fish, there is counterbalancing/offsetting of that harm. There was some discussion regarding the process of effects assessment, residual impacts and offsetting those residual

impacts, noting that site specific assessments are undertaken to try to understand impacts and offset them.

A question was asked about whether or not DFO works with First Nations directly to understand the impacts? DFO confirmed they do work with First Nations to understand impacts and noted there are 2 parts to habitat banking: i) building habitat prior to building projects requiring offsetting and, ii) issuing of an authorization from DFO for an impact. There is engagement and consultation on all of these aspects.

A question was raised on whether or not New Brighton Park was offsetting a specific development. DFO responded that that New Brighton was not an offset for a specific development but that habitat banking means you are building the offset up front. At some point down the road, there might be a development that causes an impact and VFPA would apply to use the bank if applicable to their project. Habitat banking is not a typical approach where you build habitat to offset a specific project.

There was discussion regarding use of the term "conservation" around habitat banking. DFO noted that it is a term used in the policy document to distinguish between a habitat development project and an offsetting project. First Nations noted that there may be concerns with the term because Aboriginal rights can be set aside in favour of conservation; they feel the reference needs to be changed. New Brighton Park shouldn't be considered a conservation project; rather it should be described as a habitat enhancement project. This is important in relation to Aboriginal rights and title interests. There is also strong concern that a proponent may unduly sway the Crown in terms of habitat banking project use. The concern is that proponents have a "bank" they can automatically draw from, with construction down the road. DFO noted the terminology concern and also advised that *Fisheries Act* may change; however, the new Act is likely to be supportive of habitat banking. The information we have is that the proposed Act is likely to take elements of the policy and bring it into the new *Fisheries Act* on a more formal basis as a way to deal with offsetting.

Concerns were raised regarding the overall concept of habitat banking and that it could be used to unduly sway the Crown to grant an Authorization (if habitat is already banked).

A general concern was also raised by First Nations regarding a need for addressing dyking on the south arm of the Fraser River at a strategic/ innovative level. First Nations are very connected to this land, and its water and resources; as well, it affects several aboriginal fisheries. There is a need for DFO to help to deal with fisheries issues in the area. DFO noted the concern and committed to bring this up to other sectors in the Department. DFO advised that efforts are being made to try to balance benefits of habitat banking (i.e., doing things up front) to make sure that down the road, when it is being used to offset, there is a really clear understanding of the specific benefits of the banking project to balance the impacts of the project. It was further noted that having a habitat bank doesn't guarantee that you will receive an authorization as the impacts would be evaluated separately from the offsetting.

Concern was raised that DFO doesn't say "no" to projects. Examples of projects where DFO has not granted an authorization were briefly discussed (e.g., Fish Lake (Taseko)). DFO explained that even if an authorization isn't denied, proponents often 'cut their losses' earlier in the review process, so a project review doesn't often conclude by 'denying' an authorization. Such projects are often rescinded by proponents then sometimes resubmitted after having been relocated or revised. Regulatory staff review the projects and apply standard mitigation measures to avoid impacts. There is reliance is on consultants, as professionals, to design a project to avoid/mitigate impacts to fish and fish habitat.

Under the new *Fisheries Act* there a public registry of projects is proposed.

Concerns were noted concerning Atlantic fish farms.

Additional habitat bank concerns were raised about the projects being discussed being tied to specific locations - that DFO was requesting acceptance of impacts in relation to those projects at this time.

Additional note: DFO is not undertaking any projects-specific consultations to exercise any legislative authority under the Act at this time. The intent of this meeting was to discuss the VFPA-DFO arrangement that may enable future projects, and determine how First Nations would like to engage on habitat banking.

DFO clarified that consultation will be completed when the impact is proposed and that consultation for a Fisheries Act authorization is required when DFO contemplates a decision under the Act. This is what the Fisheries Protection Program does. DFO consults on the impacts being proposed and on whether all the avoidance/mitigation measures have been applied, and what should be done to offset impacts. Although there is some uncertainty around offsetting (i.e., is it functioning or not?), the intention of habitat banking is that there is benefit from having certainty of whether the habitat is functioning and productive.

There was discussion on habitat creation; land-based vs habitat created in the ocean. DFO indicated that habitat creation is somewhat different than restoration. Restoration is the rehabilitation of something which was previously fish habitat that may have been lost, whereas habitat creation is about creating something new. The intention of habitat banking is to create and improve net benefits to fish.

There is a strong desire from First Nations to be brought in early to discuss habitat banking at the forefront when habitat banking is being planned, not just when there is a project requiring consultation. With regard to "habitat" it needs to be recognized that you can't create habitat, you can only change habitat and that you are displacing something to create habitat, whether or not it is land-based and that, too, needs to be accounted for. There were questions regarding when consultation effort was undertaken by DFO in regards to habitat banking. DFO confirmed that the federal legal consultation requirement is as part of a permitting authority.

There was some discussion on what this means. DFO advised that if there is no serious harm to fish that proponents would not need authorization - prior to building some types of habitat banking projects (i.e., if the project was land-based). For New Brighton Park, VFPA were digging a hole in the park. The park wasn't providing a benefit to fish, now it is. It did not require a *Fisheries Act* Authorization.

Concern was expressed regarding this approach to habitat banking and the need for authorization for the New Brighton Park project as it is attached to a major water source. From a First Nations perspective, the area is occupied and used and consultation is needed when making those changes.

There was discussion on consultation. Concerns were expressed that the Nations present aren't being sufficiently consulted. It was expressed that Aboriginal rights and title (under the Douglas Treaty) are perpetual and that the First Nations need to preserve their relationship with the Crown and ensure they do not fetter those rights. Habitat banking should be viewed under a full-spectrum lens to ensure consultation is fulsome and adequate.

DFO noted that while habitat banking in concept isn't new, that the point of meeting now is to advise that the Port has a habitat bank, that the bank agreement is being renewed and as well, to understand what the concerns around the VFPA bank are. It is not intended this to be consultation on the overall system of habitat banking, although those concerns will be noted.

Participants advised that they haven't been included in previous conversations on habitat banking and that in light of reconciliation, First Nations communities should be included in all decision making relevant to their lands, waters, resources including those regarding habitat banking. Habitat banking needs to be discussed at the point that projects are being initiated. First Nations expressed their desire to be involved in decision-making and in setting goals together for habitat banking that are acceptable to First Nations. Traditional knowledge should be considered, with the end goal of consumption in mind.

VFPA responded that they will discuss the development of objective measures and the incorporation of First Nations into project planning and project development. They advised that the projects recently completed were improved due to working with First Nations from the beginning. VFPA advised that they want to know how to implement this and work with Nations and determine what that looks like [for each nation]. The proposed process presented is a starting point, and VFPA is seeking advice on defining and creating the path forward.

VFPA and DFO acknowledged that there may be a need for further discussions on habitat banking projects. These discussions are on the current proposed arrangement between VFPA and DFO, which is a high level arrangement that isn't specific to projects at the ground level. The arrangement itself is about how to manage, build and deliver on habitat banking projects. Processes for seeking input on projects and gaining input are not concluded, and this approach is to gather input from the beginning to inform later stages and determine how Nations wish to be engaged/ consulted.

First Nations consider it a significant issue that they feel they are forced into a pre-approval, pre-consultation environment for habitat banking - not specifically in relation to VFPA but in general. There is a strong desire to understand what all of the projects are, what projects will be proposed or put forward ahead of others and why. The process is as important as the outcome decisions for habitat banking projects and this is very important.

There was discussion on the Douglas Treaty as First Nations advised that the Douglas Treaty has never been recognized by DFO. There is concern that it has not been acknowledged but that DFO wants their consideration for habitat banking. Sentiment was expressed that habitat banking is a way out of infringement and that DFO is justifying infringement on Aboriginal and treaty rights - should call it an "infringement bank". There is a strong desire across all levels of government of good engagement.

VFPA and DFO committed to follow up with attendees and provision of summary notes. Consideration will be given to a follow up meeting should attendees wish to have further discussion regarding issues that were brought up, and on the processes and proposed DFO-VFPA habitat banking arrangement.

**Pages 1270 to / à 1283  
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pages 1211 to / à 1224**



**Smith, Shona**

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Monday, December 10, 2018 9:28 AM  
**To:** Nutton, Byron; Thorpe, Suzanne; Smith, Shona  
**Cc:** Ruffo, Gord; Scoble, Jemma; Lien, Meaghan  
**Subject:** RE: Draft Meeting Notes from Nov 29 PRO Meeting - FOR DFO REVIEW  
**Attachments:** 2018-11-29-HEP-AG-VFPA-PRRO-VFPA-DFO-Workshop Notes-DRAFT For DFO Comment-Rev0.docx

Good morning all,  
Please find attached the drafted notes from our Nov 29/18 meeting with People of the River Referrals Office, in Chilliwack.

We have not received any written comments/edits back from DFO on the previous 2 sets of notes provided (Sept 16 & Oct 11) , we would kindly request any comments asap please, such that we clearly understand your expectations regarding the meeting summaries. Consistent with our regular engagement processes, we feel it is important that relevant summaries be provided in a timely manner to Indigenous groups, so your feedback is appreciated to ensure the summaries are in the format you prefer. Please advise.

Thank you

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

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**From:** Ruffo, Gord  
**Sent:** Friday, November 16, 2018 6:01 PM  
**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Smith, Shona <Shona.Smith@dfo-mpo.gc.ca>  
**Cc:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** Draft Meeting Notes from Sept 11 and Oct 16 Consultation Sessions

Hi Byron, Suzanne and Shona  
Attached are the draft Meeting Notes from our Sept 11 and Oct 16 consultation sessions. Please review and provide your edits and return to Jemma for distribution to the Aboriginal groups.

Thanks

**Gord Ruffo P.Eng.**  
Senior Project Manager  
Habitat Enhancement Program



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place

Vancouver, B.C. Canada V6C 3T4

P: 604.665.9018 | CELL: 604.202.8022  
[portvancouver.com](http://portvancouver.com)

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## VANCOUVER FRASER PORT AUTHORITY MEETING NOTES

### VFPA HEP & DFO Information Session with Aboriginal Groups

Date: Thursday, November 29, 2018  
 Time: 9:00 a.m. to 11:30 a.m.  
 Location: People of the River Referrals Office, Building #10, 7201 Vedder Rd,  
 Chilliwack, BC, V2R 4G5

#### Participants

People of the River Referrals Office (PRRO): Vancouver Fraser Port Authority  
 Jemma Scoble  
 Charlotte Olson  
 Gord Ruffo

Lower Fraser Fisheries Alliance

Fisheries and Oceans Canada  
 Shona Smith  
 Suzanne Thorpe

#### Agenda

- | #  | Item  |
|----|---|
| 1. | Introductions   |
| 2. | VFPA Presentation <ul style="list-style-type: none"> <li>Objectives of Information Session</li> <li>Overview of VFPA's Habitat Enhancement Program</li> <li>Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li> <li>Project example: New Brighton Park Shoreline Habitat Restoration Project</li> </ul> |
| 3. | DFO Presentation <ul style="list-style-type: none"> <li>Requirements for Fisheries Act Authorizations</li> <li>Proponent-led habitat banking</li> <li>Habitat banking arrangements</li> </ul>   |
| 4. | Questions and General Discussion  |

#### Notes

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#### Meeting summary:

(b) (5) opened the meeting.

Introductions by attendees.

(b) (5) informed VFPA/DFO of Federal Protocol Agreement that they are close to executing.

(b) (5) provided additional information:

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

- It is a consultation and engagement protocol that outlines how the federal government will consult with the 16 Nations.
- PRRO has met with DFO already in relation to the protocol & VFPA has expressed interest.
- PRRO will be reaching out to federal agencies soon.
- [REDACTED] will be the coordinator.
- Federal protocol process will be embedded in the existing SEA process and will be very helpful for leadership and members of 16 communities.
- PRRO has found it challenging that there are some agencies that aren't part of SEA, like MOTI.
- Other good developments are happening at the provincial level. PRRO is coordinating with a number of First Nations organizations on a shared decision-making forum with 4 different Provincial ministries (three-year pilot program).

### Review of agenda (Jemma Scoble)

[REDACTED] clarified that PRRO does not consider the meeting to be consultation as PRRO is not a rights holding body.

### VFPA presentation (Charlotte Olson)

Topics:

#### Objectives of the session (Slide 3):

- Share information on VFPA's consultation process used for delivery of habitat project that are proposed for the VFPA habitat bank.
- Obtain input on VFPA's consultation process used for habitat projects.
- Provide information on how habitat banks are used to offset infrastructure projects.
- Charlotte Olson (CO) advised attendees that comments and questions are welcome anytime during presentation.

Habitat Enhancement Program – Overview (slide 5)

Habitat Enhancement Program - history & achievements (slide 6)

Consideration for proposed projects (slide 7)

#### VFPA Jurisdiction (slide 8)

- CO noted Harrison River was an example of a potential habitat restoration opportunity located outside of VFPA jurisdiction.
- [REDACTED] asked about the former VFPA/Provincial Head Lease. CO noted that some projects are proposed within the Provincial area on the North Arm of the Fraser River (e.g. ex-Head Lease Area), and that the North Arm is heavily industrialized. [REDACTED] asked whether provincial jurisdiction is to the high-water mark or low water mark. Gord Ruffo (GR) clarified that provincial land includes the river bed in the area.
- GR showed location [map on slide 8] where land becomes federal, and area where VFPA would deal with provincial and/or municipal land.
- Suzanne Thorpe (ST) asked about the process related to the federal/provincial lands. CO/GR provide information. [REDACTED] commented that PRRO hasn't heard much on the Head Lease transfer and is not sure if there have been improvements on the North Arm. [REDACTED] commented that it is a terrible representation of BC in terms of managing the Fraser River.

s.19(1)

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

- GR/CO noted that Richmond has been a good partner and the program has been engaging on the South Arm Jetty Project. GR explains Richmond's interest is that they are a city that is located below the ocean's high water mark, and with sea level rise, they are looking at long term opportunities to protect the city.
- JS discusses the Glenrose Tidal Marsh Project as an example of VFPA advancing a First Nations priority project.
- [REDACTED] asked how fisheries productivity is considered given it is hard to quantify. CO explains how the increase in productivity is demonstrated and the need to show measurable fisheries benefits in advance, as well as the post-construction monitoring that is in place to demonstrate the habitat project was successful compared to the existing conditions.
- [REDACTED] asked if habitat projects consider all species of fish. CO confirms the habitat projects target improvements for all aquatic species and not just salmon, that the projects target multi-ecological functions.
- [REDACTED] asked if VFPA has been working with federal Species at Risk (SARA) folks on eulachon. CO explained VFPA's recent contribution to programs and studies, including LFFA work on eulachon. ST explained that SARA is another unit in DFO's Ecosystem Branch, so she would be talking to them about anything touching on SARA. She added that if her team was looking to do a banking project that was to provide productivity benefit to eulachon, they would talk to the SARA unit.
- CO notes that SRKW (relevant to SARA) critical habitat is part of project considerations related to any dredging activities in that area, from a permitting perspective.

GR/JS explained phases of VFPA habitat project delivery and associated consultation process.

**s.19(1)**

- [REDACTED] asked how VFPA determines who is consulted. JS explains VFPA process, noting general engagement on HEP (as a program) and consultation on specific projects.
- [REDACTED] asked about the estimated cost per project for maintenance. GR explains that the objective is to make project's maintenance free. We want them functioning for the long term. VFPA has learned a lot over the years of doing projects and provided the example of Canada geese feeding on young marsh plants and what has been learned from addressing that issue. There could be things that need to be managed. CO added that this is part of the work VFPA does and that the budget is prepared knowing there will be some maintenance, like logs, fencing, and the range depends on the project and its size. It could be 0-10% of the overall project delivery cost.
- [REDACTED] asked how VFPA geese proofed its habitat projects. GR explained it is with snow fencing and that the airport struggles with the same thing. The objectives are to exclude geese, and get the plants to establish.
- [REDACTED] asked how long into the future VFPA is projecting costs. CO explained VFPA obligations related to maintenance. She commented that if designed, constructed, and maintained properly sites should not require long maintenance requirements (e.g. >5yrs)
- ST commented that habitat banking projects are completed in advance (of any infrastructure project), and annual monitoring is required, and reviewed by DFO. If the site is functioning, DFO can let go on monitoring requirements. The whole purpose is to build sustainable projects, so if the project is not performing, we can identify it early.
- [REDACTED] commented on historic impact of port activities and not being able to do enough to address all the damage. ST commented that she is not sure how the port is addressing past historic impacts, but for every Nation in BC it is very difficult to discuss how to do that.

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

- GR noted that one of the benefits of the banking program is that habitat is created and it is not being used (right away) to offset an infrastructure project. [REDACTED] commented that it is hard to offset all the impacts of development within the port's jurisdiction. CO responded that there is an acknowledgement of the historic loss of wetlands, from a variety of historic development in the Fraser River estuary.
- [REDACTED] noted the change in terminology with use of "offsetting". ST explained that it was formerly called 'habitat compensation'.
- [REDACTED] asked VFPA how much is being spent over next 10 years on banking projects. CO responded that there is no committed spending in place, but there are priority projects. VFPA's habitat bank is funded as a capital program with a budget in the multi-million dollar range. [REDACTED] asked about the timing for the funding. CO responded that there is no time restriction. GR added that it takes time to do a project from beginning to end. [REDACTED] asked if there is a budget over a certain number of years. GR responded that it is approximately \$10 million over the next 4 years, to deliver current priority projects.

CO walked through the NBP project.

- [REDACTED] asked about historic fill brought in to area. CO explained past construction and development activities in the upland area within City of Vancouver lands generated the historic fill that was placed at NBP.
- [REDACTED] commented on the Go-Pro image of fish at NBP and sought confirmation that it was Coho. CO responded, yes and noted that there are juvenile Coho (and other salmonids) utilizing the lagoon.
- [REDACTED] asked if any DNA analysis has been done. CO said no but VFPA is interested in exploring it. [REDACTED] added that it would be good to see what stocks are using these areas. [REDACTED] noted that there is next to nothing in terms of juvenile salmon information in terms of estuary use, specifically for Chinook. Burrard Inlet is a vital estuary and nobody knows where the fish are coming from. We have DNA banks for all 25 types of sockeye existing on the Fraser. [REDACTED] added that it is more affordable now and it would be good to consider this for any foreshore habitat VFPA is doing, if you can get permits. New research from UBC is indicating that juvenile salmon use estuary more than previously thought. If we can take this information and further develop the knowledge, it will be helpful and if we can show species of conservation concerns are there, you can leverage funding.
- [REDACTED] asked about the cost to complete the New Brighton Project. CO responded that it was \$1.5 for construction, and overall \$3 million for full delivery. [REDACTED] asked if there was any dirty dirt. CO explained that about 7000 m<sup>3</sup> needed to be disposed offsite. The contractor created berms (utilizing the clean materials) with a small amount being taken offsite, due to soil quality reasons.
- [REDACTED] asked HEP does an inventory/analysis of soils. CO explains that it is done really early on to determine if it is going to be a challenge for the project. She added that HEP can't create enhancement in contaminated areas because of the cost of it (e.g. disposal costs) and that some projects are prohibitive because of past use. [REDACTED] added that it will cost way too much in some areas due to contamination. CO explained that 20 boreholes were drilled at NBP with soil and groundwater testing completed 2 years before construction.
- [REDACTED] asked about the creek outlet. CO explains City of Vancouver's plan for connection, storm drain, no fisheries values, fish-access is limited due to water flow and grading, but the creek connection was not meant to be for fisheries access. The creek is a park feature connection that the City asked for. Within the wetland, the aquatic species are salt water oriented, as the freshwater flows from the constructed creek are very low. [REDACTED] added that if there was storm water runoff, it would be a

s.19(1)



**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

concern. CO responded that VFPA looked at it for plant selection, and current and future flows. She added that management of storm water generally is huge problem.

- ST noted that the Renfrew Revitalization Project was planned and it was not possible to put an active fisheries stream in there all the way up, so they tried to recreate functions in the upland area. There are so many lost streams across Burnaby and Vancouver.
- CO clarified that VFPA didn't do that work described by ST - it led by City of Vancouver.
- ST explained attenuation – the process of water retention onsite and slowly releasing it in a controlled discharge out to a surface body of water (e.g. out to the ocean). Bioswales and wetland features that are urban in nature are some ways of doing this. ST noted that COV and Burnaby have been doing some of this work recently, as part of their long-term visioning.
- [REDACTED] can imagine consultation with residents.

[REDACTED] joins.

**DFO presentation**

- ST walks through DFO presentation – Overview of Proponent-led Habitat Banking.
- ST explained: *Fisheries Act* going through review – currently proposed new Act is with the Senate and DFO is waiting for what their requested changes will be.
- SS added that there is no update regarding timing. It is in its second reading. Steps after that would be Bill C68 would need Royal Assent, and that would come in June 2019 – depends on getting through parliamentary process.
- ST added that DFO is not expecting huge changes to policy, could be a lot more guidance on types of banking projects that would qualify, could be host of changes. May look to regulate process more broadly – monitoring requirements.
- CO commented that there already are requirements for monitoring of VFPA habitat banking projects, per our current Agreement with DFO. ST responded that they would be regulated in legislation in the future. ST indicated there would be no choice about what monitoring would look like – would be prescriptive about the level of detail. ST noted verbiage around the Act is likely to change, going back to old HADD, coupling with serious harm. ST noted there was feedback from Canadians during fisheries review. As a result, program policies will change substantively when looking at smaller impact, not just when serious harm. Looking at loss protections and modern safeguards to protect fish.
- ST explains role/responsibilities of her department. Moving into integrated planning and more involvement on processes, such as land uses. See slide 4
- Regulatory review process (slide 5) – starts with self-assessment process, web-based process to see if a development project will or will not impact fish and fish habitat, opt out if determines not serious harm – then don't look at the project. If Proponent doesn't know, or their project will have impact, a Proponent will submit their development project for review through DFO Triage unit that reviews initial parts of project, if it won't have an impact, DFO issues a letter with best practices information, or will advise that an Authorization will be contemplated upon the Proponent's formal application. If required, the Proponent will submit an Authorization application with regulatory standards complied with, information requirements, submit and clock starts. Number of considerations -section 6 factors: contribution of fish to habitat productivity, standards and measures to avoid impacts, public interests, must consult with Indigenous people on impacts to rights. Offsetting requirements with Authorization or may draw on their bank to meet requirements.
- ST presents offsetting measures slide 6 – what is done after all project impacts avoided or mitigated. Outlines general principles.

s.19(1)

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

- Banking concept intended to provide upfront offsetting, after the site is established, DFO contemplates if it is appropriate for the proposed offsetting use (via an Authorization), if Proponent is applying to use it. Important to note that at that time DFO is required to consult (e.g. in an Authorization scenario).
- What is a Proponent -led habitat bank – slide 8 – measurable benefits to fish productivity and habitat, credits may be used at later date.
- Conservation projects – two categories habitat restoration or creation, chemical /bio manipulation not done to date and not contemplated for habitat banking – hard to imagine how to do this. Not aware of any across Canada. It is a potential in offsetting policy, would complete more in terms of a project being undertaken. [REDACTED] requested an example. GR provided the example of a fish hatchery.
- Habitat restoration and enhancement – sand bar San Juan River – Pacheedaht FN. Slide 10. Examples of type of work that can be done. Many in Chilliwack.
- [REDACTED] asked about Brown Creek wetlands removal of anthropogenic barriers to fish migration. [REDACTED] explained that this is man-made. Examples: Dam removal, culverts removed, streams daylighted. Habitat creation – NBP created habitat out of an area that was land based and brown creek wetlands another example of that. ST noted that DFO's Resource Restoration unit works with partners to create new fish habitat, funding programs available for interest groups and First Nation's organization to apply for funding for this work – rec fisheries conservation program, coastal restoration fund.
- Habitat credit ledger – ST explained how the ledger works. Proponent responsible to track and DFO as well – do it together.
- Benefits of Habitat Banking – Strategic approach, Proponents can interconnect ecosystem components, allows cost advantages when a Proponent can look at non-functioning habitat and restore that. Reduces uncertainty with building projects, habitat banking projects completed in advance - can see them and know it is functioning ahead of time, can compare project impacts better with the project offsets. Established and measurable. Can show public in a tangible manner that offsetting will be successful. Just because it is built by a Proponent, doesn't commit DFO to provide an Authorization for their proposed development project – doesn't mean will be able to use all credits. Has to be something applicable to a project. We can keep to like to like but would negotiate that at time they come in with application for an Authorization with us. [REDACTED] asked if credit is transferable.
- ST noted that DFO doesn't want a habitat project in Vancouver harbour to be offset by something (e.g. a development project) on Vancouver Island.
- [REDACTED] asked if the area coverage is determined from habitat in and out. If you built 100m<sup>2</sup> of habitat and the project physically impacts 100m<sup>2</sup> but has downstream effects, how is that calculated?
- ST responded: when put into bank, it is a straight up credit or area in m<sup>2</sup> built, when we look at impacts, we use trade-offs/different methods, hierarchy of types of things we look at for offset, like for like, then like for unlike. It brings into question what productivity is and how we account for that. Proponent comes with plan in place and we negotiate an agreement from there.
- [REDACTED] asked what ratio is applied. ST responded that the new Act will have additional guidance but for the most part DFO looks at available research on productivity and productivity values and uses national guidance.

s.19(1)

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

- [REDACTED] asked if at end of the negotiation, at the Proponent's end, is the in/out usually equal or does it depend on the project. ST clarified that it is different and depends on the project and provided examples: value of habitat being impacted, whether it is entirely lost or just some capacity reduced, if water levels are lower and fish may not have access to that area in critical times of the year, or they may have access. She further explained, it relies on fisheries assessors who are reviewing the projects following the rules of thumb wherever we can. Try to use established productivity rule for analysis. USA has lots on this and DFO tries to look at this.
- [REDACTED] commented: it goes both ways, if you reconnect a small watershed for Coho, you suddenly opened up whole bunch of habitat.
- [REDACTED] added that a small culvert could be more valuable than the equivalent square footage.
- ST commented on indigenous consultation (slide 14) – Decisions under Act, require we consult. If issuing Authorization, actively consult. [REDACTED] confirmed both asserted and treaty rights are considered.

**Habitat banking arrangements – slide 16**

- ST explained DFO is engaging to get input into the processes that has been explained. Generally, terms and conditions related to how the bank is implemented operationally and there is a service area for the agreement as well as the responsibilities of VFPA and DFO in administering the agreement, the process for habitat credits and it sets out how engagement undertaken with First Nations. DFO has national template for this work.
- [REDACTED] asked if DFO delegates procedural aspects to Proponent. ST: yes and no. There is some negotiation with that.
- [REDACTED] asked who does the consultation? ST responded that on the agreement it is not consultation but engagement. DFO has no legal authority being exercised on that. [REDACTED]; thanked ST.
- CO added that VFPA is looking for input from PRRO regarding the agreement and VFPA is consulting on each banking project.
- ST explained DFO use of consultation and engagement, noting that this is "early engagement".
- [REDACTED] asked how credits are calculated. ST explains the process for determining credits and provides an example with slide 12.
  - Categorized types of habitat.
  - Real credit for real habitat.
  - When contemplating an Authorization, some negotiation occurs. Example: Proponent may want to use brackish marsh or subtidal reef and may be impacting freshwater tidal marsh.
  - Figure out how credits translate when DFO reviews an application for Authorization.
- ST confirmed credit is calculated in area (meters squared, m<sup>2</sup>).
- [REDACTED] asked about ineligibility and eligibility criteria for who can apply for credits.
- ST explains that it is only worth going through the process if you are a big Proponent. Only large Proponents are asking for banking agreements but municipalities have shown interest. DFO has 4 agreements (Timberwest, DND, VFPA...).

**Process to develop an arrangement – slide 17**

- ST explained that the VFPA/DFO arrangement, has been in place since 2012. Meeting with PRRO because DFO is renewing the agreement with VFPA for continued use of the bank.

**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

**Questions – Slide**

- [REDACTED] commented that questions and concerns regarding the Fisheries Act during the Fisheries Act review process were never addressed from an Indigenous perspective and the feedback process was too fast.
- ST explained a lot of Indigenous organizations and groups submitted similar submissions related to Section 6 factors, about 13 or 14 things needed to be addressed, including cumulative effects, consultation and precautionary approach. All of those will be incorporated into the new Act as far as DFO is aware. There will be a strong indigenous voice and the current government is extremely interested in pushing the reconciliation agenda forward.
- [REDACTED] Commented that there is a lot of development within the territory. The new federal protocol has language around engagement and is fairly general. They have the capacity to get underneath it and properly engage and have the responsibility to move forward with the federal government. LFFA is very entrenched in federal consultation, and is advising on big things. At the Tribal Council level, they are cautious about it.
- [REDACTED] noted federal consultation network and that Angela, manager of consultation at DFO was involved.
- [REDACTED] commented that it would be good to connect through this. It is easy to work together on positive projects. He hopes to see some action from this meeting to move the discussion forward with DFO. SS responds that DFO is in the process of expanding the Indigenous consultation team. She notes that DFO hears a lot from Indigenous groups about consultation fatigue.

**ACTION: Shona Smith (SS) to make sure DFO staff are informed about federal consultation network.**

- [REDACTED] noted that they are currently collecting signatures from communities and are just about done.
- SS asked if it is a first for this type of protocol.
- [REDACTED] confirms it is the first in western Canada. [REDACTED] added that the funding component is being figured out.
- ST explained that VFPA is the first in the door with an agreement renewal and DND will be next.
- [REDACTED] commented that they have always known the DFO engages at number of different tables, and they will be hoping to augment those relationships to find ways to help their communities.
- ST discussed challenges DFO has had since the staff cuts and their plans to staff up. DFO is undertaking more Indigenous consultation and implementing an integrated planning and management sector.
- [REDACTED] responded that PRRO can help communicate that out to communities as DFO plans become clearer.
- [REDACTED] asked how long the renewed agreement will be in place. CO responded that the original one was 5 years, was extended by DFO over the last 2 years, and expires March 2019. VFPA has been working on process with DFO about what the new agreement looks like. The intent is to have a 10-15-year time frame and to execute the arrangement in Q1 2019.
- [REDACTED] asked about timing for banking agreement renewal for VFPA and others with agreements with DFO. ST: confirmed intent to executing the VFPA agreement before the change to the Fisheries Act and other agreements (DND, Timberwest, Small Crafts) after new Act comes into effect.

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**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

- [REDACTED] asked if when new act comes into place, there will be a mechanism in the VFPA agreement so it is reflective of changes ST responded, yes. Noting a review clause for every 5 years and that DFO will be discussing monitoring and other things with the port as part of ongoing discussions.
- ST explained that another point of engagement for DFO is when they are contemplating new policies – there will be more consultation. SS added that DFO will do sessions once the legislation changes, and noted that policies have to change to reflect the changes. Discussion with Indigenous groups could pertain to: information requirements or timelines regulations put into force, and if banking is contemplated for new regulations. All regulations require consultation because decisions. There will be engagement and consultation on policies. DFO is looking for input, feedback and ideas about productivity and how it is measured.
- [REDACTED] commented that it would be good for attendees to meet with PRRO again when the DFO/VFPA agreement is in place and PRRO can provide an update regarding their federal protocol agreement.
- JS explained opportunities for continued input from PRRO regarding potential sites, workshops that may be of interest.
- [REDACTED] discussed concerns that their relatives have regarding health of and access to clam beds and marine aquatic species, noting cultural loss for communities like Semiahmoo.
- JS noted that VFPA has heard interest from Indigenous groups on VFPA hosting a clam bed workshop and this is something that is being considered for 2019.
- [REDACTED] asked about VFPA involvement in flood management, noting it is an unfunded process and is hard for them to participate. CO responded that VFPA's Environmental Programs is working on flood management.
- [REDACTED] asked if VFPA considers sea level rise.
- CO confirmed sea level rise is considered in the coastal engineering design for each habitat project, that VFPA uses the best available science and refers to provincial guidelines. Habitat is resilient with the elevation range they can survive at.
- [REDACTED] discussed a past meeting with Port directors regarding navigation and a longer term plan around Harrison, related to a transfer station which had implications for fish and fish habitat. [REDACTED] explained they have vision as Indigenous people, about what foreshore would look like, how water flows and comes back, river cycles, and times of year. He commented that the current fisheries window we operate under is based on interior Nicola Thompson Coho – that Coho is entirely different from lower Fraser Coho. They spawn and come out of the gravel differently. Dredging eulachon spawning ground is a problem. PRRO/LLFA interest is to look after life forces in our territory and we have objectives based on our cultural traditions.
- [REDACTED] requested summary notes from the meeting.
- [REDACTED] suggested the opportunity of VFPA funding the foreshore management symposium.
- [REDACTED] discussed importance of long term foreshore management plan from an Indigenous perspective and jurisdictional (municipal) challenges when looking at solutions to manage the foreshore. Suggested VFPA and others look at flooding, water retention, navigation, dredging, stopping gravel removal. Like mindedness document could come out of a symposium.
- [REDACTED] added that there could be a proposal put out together.
- [REDACTED] discussed the Fraser Watershed Restoration Initiative which had a number of NGOS behind it. Assembling a \$500 million fund for the entire Fraser river watershed – very ambitious, reaching and exciting. PRRO want to participate.
- CO noted scope of work of the Habitat Enhancement Program/team, adding that VFPA is involved in a number of initiatives through different departments.
- JS explained next steps, noting VFPA to provide a high level summary.

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**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

- [REDACTED] discussed People of the River conference: Two-day event that provides an opportunity to look at what people are doing in the territory. [REDACTED] explained that PRRO can present to the communities and hear what is going on out there. She noted that often people take ITK and use it but don't report back to knowledge holders/community. This is a chance to bring it back to communities.
- VFPA/DFO thank PRRO for the meeting.

Meeting end.

**Documents provided**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. DFO Presentation - Overview of Proponent-led Habitat Bank
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

**Note taker**

Jemma Scoble

No further information has been removed or severed from this page

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## Smith, Shona

---

**From:** Thorpe, Suzanne  
**Sent:** Tuesday, December 11, 2018 1:34 PM  
**To:** Nutton, Byron  
**Cc:** Smith, Shona  
**Subject:** VFPA Consultation Record of Discussion (2018-09-11)  
**Attachments:** 2018-09-11-VFPA-DFO Consultation with Aboriginal Groups - DFO\_revised\_SUMMARY.docx; 2018-09-11-VFPA-DFO Consultation with Aboriginal Groups - Meeting Notes....docx

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Follow Up

Byron/ Shona;

Attached is the DFO-edited version of the Record of Discussion for the **September 11<sup>th</sup>** meeting. Please review/comment. As per the **October 16<sup>th</sup>** ROD sent to you in separate email yesterday I have also attached the original version.

Let's discuss. Please let me know if you have concerns! I will work on the Nov 29<sup>th</sup> session notes and I am hoping that we can return all 3 revised versions to VFPA before the end of this week.

### Suzanne Thorpe

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
Government of Canada/ Gouvernement du Canada  
200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512

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pages 1124 to / à 1128**

**Pages 1302 to / à 1308  
are duplicates of  
sont des duplicatas des  
pages 1204 to / à 1210**

## Smith, Shona

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**From:** Thorpe, Suzanne  
**Sent:** Thursday, December 13, 2018 12:12 PM  
**To:** Nutton, Byron  
**Cc:** Smith, Shona  
**Subject:** VFPA-DFO Consultation Record of Discussion (2018-11-29)  
**Attachments:** 2018-11-29-VFPA-DFO\_Engagement-with-AboriginalGroups\_Chilliwack-DFO\_revised\_SUMMARY.docx; 2018-11-29-HEP-AG-VFPA-PRRO-VFPA-DFO-Workshop Notes-DRAFT For DFO Commen....docx

Hi Byron/ Shona;

Attached is the revised DFO-edited version of the summary Record of Discussions for the **November 29<sup>th</sup>** meeting in Chilliwack. Please review/ comment.

As per the **September 11<sup>th</sup>** and **October 16<sup>th</sup>** RODs sent to you in preceding separate emails, I have also attached the original notes version for your reference.

Let's discuss - I am happy to make additional revisions, as may be needed. Please let me your concerns/ recommendations!

### Suzanne Thorpe

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
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200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512

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pages 1254 to / à 1261**

**Pages 1318 to / à 1327  
are duplicates of  
sont des duplicatas des  
pages 1286 to / à 1295**



**Smith, Shona**

---

**From:** Smith, Shona  
**Sent:** Friday, December 14, 2018 5:08 PM  
**To:** Ko, Christina  
**Cc:** Clease, Carol; Reimer, Christy  
**Subject:** RE: Expense Reports & Travel Request

I wouldn't be able to submit an expense report without a travel request, would I?

Carol already looked at all this, approved it, and said it was with Tola. Tola looked, and it isn't there.

**Shona Smith**

Client Liaison and Partnerships Coordinator, DFO  
Tel: 250-756-7256

---

**From:** Ko, Christina  
**Sent:** 2018-December-14 4:13 PM  
**To:** Smith, Shona; Clease, Carol  
**Cc:** Reimer, Christy  
**Subject:** RE: Expense Reports & Travel Request

Hi Shona,  
First of all, was there a Travel Request created and approved?

Regards,  
**Christina Ko**

---

**From:** Smith, Shona  
**Sent:** Friday, December 14, 2018 3:32 PM  
**To:** Clease, Carol  
**Cc:** Ko, Christina; Reimer, Christy  
**Subject:** FW: Expense Reports & Travel Request

Hi Carol,

My expense report for the supervisors meeting appears to be MIA. This is the one I have been trying to track down for some time. Can you look into this for me, again? I don't know what else to do. I am cc'ing Cristina and Christy as they may have an idea.

Thanks,

**Shona Smith**

Client Liaison and Partnerships Coordinator, DFO  
Tel: 250-756-7256

---

**From:** Cooper, Tola  
**Sent:** 2018-December-13 3:57 PM  
**To:** Smith, Shona  
**Subject:** RE: Expense Reports & Travel Request

Hey Shona,

I did go into today and all I had for ER from you was Chilliwack Habitat Banking. I don't know if I previously approved your Supervisor meeting and you just haven't been paid, but it is not in HRG.

Have Carol check again where it may have gone...

---

**From:** Smith, Shona  
**Sent:** December-10-18 12:53 PM  
**To:** Cooper, Tola  
**Subject:** RE: Expense Reports & Travel Request

Exactly what I had figured, which is why I followed up with Carol also. I didn't think you would leave them sitting. Not - Tola style... at all. :D

**Shona Smith**  
Client Liaison and Partnerships Coordinator, DFO  
Tel: 250-756-7256

---

**From:** Cooper, Tola  
**Sent:** 2018-December-10 12:47 PM  
**To:** Smith, Shona  
**Subject:** RE: Expense Reports & Travel Request

I felt like I had seen it, but it may have been someone else's. I do check my HRG weekly, so I imagine this got stuck somewhere, because other than last week I wouldn't have left it for more than a couple of days and I approved everything in HRG before I went on training.

---

**From:** Smith, Shona  
**Sent:** December-10-18 12:42 PM  
**To:** Cooper, Tola  
**Subject:** RE: Expense Reports & Travel Request

Thanks Tola! No problem. I had submitted my expense report, at least for the supervisors meeting, some time ago, which is why I am trying to track it down.

**Shona Smith**  
Client Liaison and Partnerships Coordinator, DFO  
Tel: 250-756-7256

---

**From:** Cooper, Tola  
**Sent:** 2018-December-10 11:52 AM  
**To:** Smith, Shona  
**Subject:** RE: Expense Reports & Travel Request

I will check – Carol did raise with me, but I did not go on the system while I was in Vancouver. I will check this week, let me know if there is an issue.

---

**From:** Smith, Shona  
**Sent:** December-10-18 11:25 AM  
**To:** Cooper, Tola  
**Subject:** Expense Reports & Travel Request

Hey Tola,

There seems to be some confusion with my expense reports submitted and where they are at in the process. I haven't been paid yet for the Supervisor's meeting, so I have been trying to track it down. I wanted to mention that you should have 2 expense reports (Supervisor's meeting & Chilliwack Habitat Banking) waiting for your approval – for me - and one travel request (Tla'amin Engagement – which I just submitted today).

Thanks Tola!

## **Shona Smith**

Client Liaison and Partnerships Coordinator  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Government of Canada | Gouvernement du Canada  
3190 Hammond Bay Road, Nanaimo BC V9T 6N7  
[shona.smith@dfo-mpo.gc.ca](mailto:shona.smith@dfo-mpo.gc.ca) | Tel: 250-756-7256

### **Projects Near Water website:**

<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>

No information has been removed or severed from this page

**From:** [Olson, Charlotte](#)  
**To:** [Nutton, Byron](#)  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Update Dec 17  
**Date:** 2018-December-17 4:19:57 PM

---

Hi Byron, sorry for the delay on responding here – it was a full week last week!

We had a good meeting with TWN on December 12<sup>th</sup>, and I have shared a copy of the August 14/18 version of our DRAFT DFO-VFPA Arrangement with them (as they had requested). It was clearly marked DRAFT, thank you for providing the OK to share.

With regards to your question below, as of last week, TWN has not specifically asked for a DFO-VFPA-TWN meeting at this time in relation to our new Arrangement.

As a specific update for you in this regard, please note that we are working directly with TWN on a separate VFPA-TWN Agreement. This is progressing.

Per my other notes below, we are also still on track to provide DFO (you) the draft "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" by the end of this week, we will be looking forward to your feedback on the draft in January.

Please call if you'd like to discuss anything before the holiday break, I am here till Friday (Dec 21), then back on Wed Jan 2.

Warm Regards,

**Charlotte Olson** P. Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

**From:** Nutton, Byron [mailto:[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)]  
**Sent:** Tuesday, December 11, 2018 12:46 PM  
**To:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Follow Up

Regarding TWN, has there been any progress on scheduling the DFO-VFPA-TWN engagement session?

**From:** Nutton, Byron  
**Sent:** 2018-December-11 12:45 PM  
**To:** 'Olson, Charlotte' <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Follow Up

Yes, I think it is OK to share with the TWN provided that it is clearly mark as DRAFT.

**From:** Olson, Charlotte [mailto:[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)]  
**Sent:** 2018-December-03 3:14 PM  
**To:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Cc:** Ruffo, Gord <[Gord.Ruffo@portvancouver.com](mailto:Gord.Ruffo@portvancouver.com)>; Scoble, Jemma <[Jemma.Scoble@portvancouver.com](mailto:Jemma.Scoble@portvancouver.com)>; Smith, Shona <[Shona.Smith@dfo-mpo.gc.ca](mailto:Shona.Smith@dfo-mpo.gc.ca)>; Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Follow Up

Hi Byron and all,

Per my messages sent below, VFPA is proceeding to prepare our draft report entitled "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" per my timelines note sent below on Nov 20. We aim to submit the draft report to you before the holiday break (prior to Dec 21) per our proposed schedule. We will also shortly be providing you the draft notes from our Nov 29 meeting in Chilliwack, thanks for presenting Suzanne! – I feel it was a constructive meeting.

Byron, when you return to the office, can you please call my mobile? VFPA is meeting with TWN on December 12<sup>th</sup> regarding a separate potential VFPA-TWN agreement. VFPA would like to share our current draft habitat banking Arrangement with TWN, as they requested this previously (e.g. when it was ready to share). It is important that I discuss this with you at your earliest convenience. Please call when you are back in the office, thank you.

Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

---

**From:** Olson, Charlotte  
**Sent:** Monday, November 26, 2018 12:51 PM  
**To:** 'Nutton, Byron' <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>; 'Smith, Shona' <[Shona.Smith@dfo-mpo.gc.ca](mailto:Shona.Smith@dfo-mpo.gc.ca)>; 'Thorpe, Suzanne' <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Cc:** Ruffo, Gord <[Gord.Ruffo@portvancouver.com](mailto:Gord.Ruffo@portvancouver.com)>; Scoble, Jemma <[Jemma.Scoble@portvancouver.com](mailto:Jemma.Scoble@portvancouver.com)>  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Follow Up

Good afternoon Byron and all, this is in follow up to my note sent last week.

A friendly reminder that we are looking for DFO's input on the proposed timelines below. Since we are together this Thursday, if you prefer to discuss in person – we can do that too.  
We'd like an understanding that we are aligned on next steps please.

Also, it's my understanding that Jemma has spoken with Suzanne regarding the format of the draft Sept 11 & Oct 16 meeting notes that VFPA provided to you for review & input. Thank you for reaching out Suzanne.  
It is important to us that we get DFO direction on what your expectations are (i.e. format/summary style etc.) such that we can meet your requirements for documenting these meetings. We are happy to adjust the format to suit DFO's requirements, but we do need your input. What we had provided you was a detailed internal draft, and we are looking for your response. Based on below, it would be appreciated if you can respond on this aspect via email by Friday of this week (Nov 30) please.

Looking forward to seeing you all on Thursday in Chilliwack!  
Kind Regards,

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

---

**From:** Olson, Charlotte  
**Sent:** Tuesday, November 20, 2018 3:07 PM  
**To:** 'Nutton, Byron' <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>; Smith, Shona <[Shona.Smith@dfo-mpo.gc.ca](mailto:Shona.Smith@dfo-mpo.gc.ca)>; Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Cc:** Ruffo, Gord <[Gord.Ruffo@portvancouver.com](mailto:Gord.Ruffo@portvancouver.com)>; Scoble, Jemma <[Jemma.Scoble@portvancouver.com](mailto:Jemma.Scoble@portvancouver.com)>  
**Subject:** VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines

Hi Byron, Suzanne and Shona

To ensure that we achieve our identified timelines for the execution of our new VFPA-DFO Arrangement for Habitat Banking, we have commenced the preparation of the "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement", per our plan agreed to with you in May 2018. This work is being advanced while recognizing we have one remaining engagement session on November 29 that will need to be included.

The tasks associated with finalizing this consultation process and the proposed dates for each task are as follows:

November 30, 2018	DFO to provide comments and edits to VFPA on meeting notes from Sept 11 and Oct 16 sessions
December 4, 2018	VFPA to provide draft meeting notes to DFO from Nov 29 session
December	DFO to provide comments and edits to VFPA on meeting notes from Nov 29 session

11, 2018

**December 21, 2018** VFPA to submit draft report titled "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" to DFO for review and comment

January 18, 2019 DFO to provide comments to VFPA on draft report

January 31, 2019 VFPA issues final report to Indigenous groups and DFO

**Please review and confirm that these dates are achievable from your perspective.**

Thank you,  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)



**Hwang, Jason**

---

**From:** [REDACTED]  
**Sent:** December-18-18 3:27 PM  
**To:** Hwang, Jason  
**Subject:** RE: Meeting with VFPA

Yes we have ready access to meeting rooms. Or we can duck into a "pod" which is a small meeting room that doesn't require pre-booking.

[REDACTED]  
Hemmera, an Ausenco Company  
T: 250.388.3584 ext. | C: [REDACTED]

---

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** December 18, 2018 3:24 PM  
**To:** [REDACTED]  
**Subject:** RE: Meeting with VFPA

I can see if I can book a room at DFO, but it can be hard to get one. Does VFPA have easier access to space?

---

**From:** [REDACTED]  
**Sent:** December-18-18 3:16 PM  
**To:** Hwang, Jason  
**Subject:** RE: Meeting with VFPA

Lets give that a go. I'll check in with Gord Ruffo and set up a calendar invitation. At Burrard Street?

[REDACTED]  
Hemmera, an Ausenco Company  
T: 250.388.3584 ext. | C: [REDACTED]

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**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** December 18, 2018 3:10 PM  
**To:** [REDACTED]  
**Subject:** Re: Meeting with VFPA

[REDACTED] will be in Vancouver on the 9th. I have something that ends at 3:00 that I can get out of a few mins early. Would it work to meet at 3:00 on the 9th?

----- Original message -----

**From:** [REDACTED]  
**Date:** 2018-12-18 2:28 PM (GMT-08:00)  
**To:** "Hwang, Jason" <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** Meeting with VFPA

Jason,

In order not to disrupt your workflow this week, Gord would rather meeting in the new year. I'm not sure how often you come down to the lower mainland but the week of January 7 would be a good time to try to fit this in, from VFPA's perspective.

Let me know how that might work out for you. If I don't hear from you via email I'll give you a ring to confirm we are not coming on Thursday this week.

Regards,



Hemmera, an Ausenco Company

303-1221 Broad Street | Victoria, BC | V8W 2A4

T: 250.388.3584 ext. | F: 250.388.3517 | C

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**Hwang, Jason**

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**From:** Magnan, Alain  
**Sent:** December-18-18 1:48 PM  
**To:** Nutton, Byron  
**Cc:** Hwang, Jason  
**Subject:** RE: VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement  
Open Item follow-up

I'll respond back to Giles then to let him know that you will get back to him later this week and to introduce Jason as the manager.

Thanks.

---

**From:** Nutton, Byron  
**Sent:** December-18-18 1:45 PM  
**To:** Hwang, Jason  
**Cc:** Magnan, Alain  
**Subject:** RE: VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up

Hey Jason,

Suzanne has reviewed the minutes from all 3 engagement sessions and they are with me to review – I have time tomorrow with Suzanne to discuss.

Now that the sessions have recently been completed, we will be moving forward with reviewing the draft arrangement with respect to the feedback provided so not sure that there is any further comment we can provide at this time.

I will get back to Charlotte this week to keep us on track.

Cheers,

Byron

---

**From:** Magnan, Alain  
**Sent:** 2018-December-18 1:26 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>; Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up

Hi Jason and Byron,

Please find attached a request from VFPA on moving the habitat banking arrangement forward. If you could respond back to Giles that would be great.

Thanks.

Al

**From:** Assier, Gilles [mailto:Gilles.Assier@portvancouver.com]

**Sent:** December-18-18 11:46 AM

**To:** Magnan, Alain

**Subject:** VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up

Hi Al,

Hope you are doing well.

There are a few open items related to the new Habitat Banking Arrangement that could be preventing us to reach a signed agreement before the deadline of March 2019. Could you please discuss with Byron the open items below and see how he could prioritize those?

1. Provide written comments on the Habitat Bank Arrangement draft that VFPA sent on August 14/18 to DFO – the only thing we have received was a short email from Byron on Oct 31, verbal re-assurance that the document was fine, and last week a very short email confirming we could share the draft with TWN. We need comments or a confirmation the draft is fine.
2. We need confirmation about the proposed timelines sent by Charlotte on Nov 20, to confirm we will be able to achieve a new Arrangement by March 2019. See below.
3. Comments on the first 2 Indigenous meeting notes provided for review is outstanding (e.g. Sept 11 & Oct 16)

The tasks associated with finalizing this consultation process and the proposed dates for each task are as follows:

• November 30, 2018	DFO to provide comments and edits to VFPA on meeting notes from Sept 11 and Oct 16 sessions
• December 4, 2018	VFPA to provide draft meeting notes to DFO from Nov 29 session
• December 11, 2018	DFO to provide comments and edits to VFPA on meeting notes from Nov 29 session
• December 21, 2018	VFPA to submit draft report titled "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" to DFO for review and comment
• January 18, 2019	DFO to provide comments to VFPA on draft report
• January 31, 2019	VFPA issues final report to Indigenous groups and DFO

Thanks,

Gilles

Office/Cell: 604-665-9078

**HABITAT BANK ARRANGEMENT:  
PORT OF VANCOUVER HABITAT BANK  
SUMMARY OF INDIGENOUS ENGAGEMENT ON  
VFPA AND DFO'S HABITAT BANK  
ARRANGEMENT**

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### Table of Contents

1.	Overview and Purpose .....	3
2.	Indigenous Groups within VFPA's Operational Area .....	3
3.	Engagement Activities .....	5
	<i>3.1 Information Packages.....</i>	<i>5</i>
	<i>3.2 Information Sessions .....</i>	<i>6</i>
	<i>3.3 One-on-One meetings .....</i>	<i>6</i>
4.	Attendance Records for Information Sessions .....	6
5.	Presentation & Other Material .....	8
6.	Concerns, Issues and Input Received.....	8
7.	Next steps.....	11
<b>Appendices.....</b>		<b>12</b>

Vancouver Fraser Port Authority (VFPA) currently operates a habitat bank that was created through a formal agreement with Fisheries and Oceans Canada (DFO). This agreement will expire in March 31, 2019 and prior to entering into a new long-term habitat bank agreement, DFO has required that outreach be undertaken to:

- This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements.

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement, regular communication and to ensure that the protection of fish and fish habitat is considered in the development of the Asia-Pacific Gateway.

December 18, 2018 DRAFT  
Rev0



## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

The following Indigenous groups' asserted traditional territories or treaty lands intersect with the lands and waters managed by VFPA:

- Musqueam Indian Band
- Squamish Nation
- Tsleil-Waututh Nation
- Tsawwassen First Nation
- Kwikwetlem First Nation
- Katzie First Nation
- Semiahmoo First Nation
- Qayqayt First Nation
- Hwlitsum
- Hul'qumi'num Treaty Group
  - Cowichan Tribes
  - Lake Cowichan First Nation
  - Penelakut Tribe
  - Halalt First Nation
  - Stz'uminus First Nation
  - Lyackson First Nation
- Sto:lo Nation
  - Aitchelitz First Nation
  - Leq'a:mel First Nation
  - Matsqui First Nation
  - Popkum First Nation
  - Shxwha:y Village First Nation
  - Skawahlook First Nation
- Sto:lo Tribal Council
  - Chawathil First Nation
  - Cheam First Nation
  - Kwantlen First Nation
  - Kwaw-kwaw-Apilt First Nation
  - Scowlitz First Nation
  - Seabird Island First Nation
  - Shxw'ow'hamel First Nation

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Skowkale First Nation
  - Soowahlie First Nation
  - Squiala First Nation
  - Sumas First Nation
  - Tzeachten First Nation
  - Yakweawkwoose First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### **3. Engagement Activities**

The following activities were undertaken:

- Sharing of Information Packages and letter
- Facilitation of Information Sessions
- Offers of One-on-One Meetings

#### **3.1 Information Packages**

Information packages were shared with the Indigenous groups identified in Section 2.

These packages included:

- A description of how habitat banks are used to offset serious harm to fisheries.
- A description of how habitat credits are deposited into the habitat bank.
- A description of how habitat credits may be withdrawn from the habitat bank and the DFO-led Indigenous consultation process associated with this withdrawal.
- An overview of VFPA's Aboriginal Consultation and Engagement Process for proposed habitat banking projects. This process demonstrates how VFPA intends to engage and consult with Indigenous groups within the identified service area and identifies how Indigenous input and knowledge will be considered throughout the project identification, development, construction and post-construction phases. Opportunities for Indigenous participation (e.g. technical design review, fieldwork, monitoring, contracting, employment and training) will also be identified as well as the process for reporting back to Indigenous groups on feedback received.
- Other relevant materials (e.g. Habitat Enhancement Program presentations, project overview/information sheets, map of Habitat Enhancement Program projects, etc.).

VFPA sought to confirm receipt of this information by Indigenous groups through follow up communications. VFPA provided responses to any questions, comments and feedback from Indigenous groups received in advanced of focused information sessions.

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### 3.2 Information Sessions

Three information sessions (Lower Mainland, Vancouver Island and Fraser Valley) were arranged to provide an accessible location for participants that required minimal travel. A proposed agenda was provided in advance of these sessions for review by participants. Key components of these information sessions were as follows:

- Presentation of material included in the Information Packages
- Attendance and support from DFO regional staff
- Questions/feedback from Indigenous groups

The schedule for these Information sessions was as follows:

DATE	LOCATION/VENUE
<u>Information Session No.1</u> September 11, 2018	Vancouver, BC VFPA Office
<u>Information Session No.2</u> October 16, 2018	Brentwood Bay, BC Brentwood Bay Resort
<u>Information Session No.3</u> November 29, 2018	Chilliwack, BC People of the River Referrals Office

### 3.3 One-on-One meetings

One-on-one meetings or other types of engagement activities (e.g. presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. Tsleil-Waututh Nation advised VFPA that they would not participate in the VFPA/DFO engagement regarding the Habitat Enhancement Program and banking agreement as these discussions are occurring through a separate process. No other requests for meetings, additional information or feedback have been received to date.

## 4. Attendance Records for Information Sessions

Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	[REDACTED]

# VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

## Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo Sinead Deery
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

## Information Session No. 3 – Chilliwack, BC (November 29, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	

s.19(1)

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

Lower Fraser Fisheries Alliance		

### 5. Presentation & Other Material

Presentation and other materials shared during the VFPA/DFO engagement included the following:

- Package of information and accompanying letter (August 2018)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation
  - Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a Fisheries Act Authorization
  - Proponent-led Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

### 6. Concerns, Issues and Input Received

Several key themes were raised during this engagement process. Feedback included the following:

#### **Importance of habitat enhancement and general support for VFPA's Habitat Enhancement Program**

- Request for the Habitat Enhancement Program to build projects on the South Arm of the Fraser River
- Interest in VFPA building projects on Vancouver Island
- Support for the projects built to-date and the consultation undertaken by VFPA

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Interest in VFPA considering projects that aren't physical (example of improved diking system design with benefits to fish)
- Indigenous involvement in all phases of a Habitat Enhancement Program project (project identification, design, construction, monitoring)
- Importance of sharing fish use data/construction monitoring reports
- Importance of Indigenous participation in the collection of data
- Providing input into what is monitored (i.e. testing taste and quality of fish for consumption rather than just fish presence and health)
- Using Western science and Traditional Knowledge to inform monitoring
- Using Traditional Knowledge in the evaluation of Projects
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat VFPA is enhancing
- Consideration of climate change in project design
- Consideration of flood management and sea level rise
- Interest in shellfish restoration

### **Opportunities for cultural recognition and education on Habitat Enhancement Projects**

- Importance of intertwining legacy and cultural history into projects
- Developing educational resources for the Habitat Enhancement Program and its projects

### **Concerns with the extent of industrialization/development and other impacts to wetlands and habitat within the Port's jurisdiction**

- Inability to compensate for historic damage/destruction of habitat
- Lack of industry accountability for impacting habitat and environment
- Balancing infrastructure development and a healthy environment
- Issues/impacts of the diking system on the Lower Fraser River
- Impacts of fish farms and importance of protecting native species
- Health of and access to marine aquatic species, such as clam beds, and cultural loss to First Nations communities

### **Consultation on Habitat Enhancement Program Projects**

- Comment that the Program's consultation is understood and has been effective
- Concern that Habitat Enhancement projects, such as the Steveston Tidal Marsh Project, may not advance due to municipal or other stakeholder interests even when First Nations are supportive
- Consideration of other types of reporting to ensure project benefits are communicated. Work with Indigenous groups to identify type information that will be useful to share with participating communities

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Involve First Nations in decision making and set goals together (example of monitoring consumption of fish)
- Importance of involving First Nations in goal setting and evaluation (DFO/VFPA)

### **Habitat Banking**

- Crown is swayed to grant an Authorization for a project if habitat is already banked
- Concern that because First Nations were not consulted when banking happened in the 1990's, their voices will not be heard on future banking projects
- Concern that habitat banking projects are tied to a specific location and as an offset, the request is that First Nations must accept the impact
- Opportunities for increased information sharing – important work is happening by many different organizations (Indigenous, NGOs, government etc.) that isn't shared more broadly and there is value in making information available.
- Concern with DFO's approach to consulting with Douglas Treaty Nations
- Concern with Indigenous engagement being at the end of DFO's slide deck
- Concern DFO is justifying infringement on Aboriginal rights through banking and that better consultation is required

### **DFO Consultation**

- Concern that DFO only consults on a project at the time an Authorization is sought
- Discomfort with language used by DFO in relation to consultation
- Suggestion that DFO consult with higher level First Nations' organization
- Comment that First Nations do not feel properly consulted by DFO
- Importance of having a "balance" and using "balancing words"
- Questions and concerns raised during the *Fisheries Act* Review were never addressed from an Indigenous perspective and the review process was too short
- Guiding principles should include one that requires offsetting to be done in a way that supports First Nations cultural values
- Concern with term "conservation" - that Aboriginal rights can be set aside in favour of conservation
- Request for DFO to address broader concerns related to several Aboriginal fisheries
- Perspective habitat is not "created" but only restored – something must be displaced to create new habitat
- Perception DFO approves all Authorizations
- Importance of First Nations being informed of projects that do not get an Authorization due to impacts



## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### Other

- Importance of long-term foreshore management planning and for VFPA to support this work and other initiatives
- Importance of ensuring constructed sites are protected into the future

### 7. Next steps

As previously noted, the objectives of the DFO/VFPA engagement process were to ensure that Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program; and to ensure Indigenous groups are provided information regarding the DFO-VFPA habitat banking agreement.

In response to Indigenous groups' feedback on the engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program, VFPA will:

- Review the Habitat Enhancement Program consultation process in light of feedback received to consider opportunities to improve its effectiveness.
- Identify opportunities to integrate feedback, priorities and ideas raised by Aboriginal groups during engagement such as producing cultural/educational materials for projects and the Habitat Enhancement Program, and identifying potential projects on the South Arm of the Fraser River and Vancouver Island area.
- Report out to Aboriginal groups on any changes from the review of the consultation process resulting from the engagement process and feedback shared.

With respect to ensuring Indigenous groups are provided information regarding the DFO-VFPA habitat banking agreement, VFPA will:

- Share this report, along with copies of the habitat banking-related information presented during the engagement process.
- Notify Indigenous groups when a new DFO-VFPA habitat banking agreement is in place.
- Respond to any future questions or requests for information related to the DFO-VFPA habitat banking agreement.

The Habitat Enhancement Program has ongoing engagement and consultation which allows for continued opportunities to address any concern or issues, to work with Aboriginal groups on identifying and advancing priority projects, and seeking to ensure the program and its projects are undertaken in collaboration with Aboriginal groups.

DFO will also be following up on feedback received during engagement. [DFO to INSERT]

## Appendices

**Appendix 01 – Information Packages Provided to Indigenous Groups**

**Appendix 02 – VFPA Presentation Material**

**Appendix 03 – DFO Presentation Material**

**Appendix 04 – DFO Frequently Asked Questions**

**Appendix 05 – Meeting Record from September 11, 2018 Information Session (Vancouver)**

**Appendix 06 – Meeting Record from October 16, 2018 Information Session (Vancouver Island)**

**Appendix 07 – Meeting Record from November 29, 2018 Information Session (Fraser Valley)**

## Thorpe, Suzanne

---

**From:** Thorpe, Suzanne  
**Sent:** Tuesday, December 18, 2018 10:05 AM  
**To:** 'Olson, Charlotte'  
**Cc:** Ruffo, Gord (Gord.Ruffo@portvancouver.com); Nutton, Byron  
**Subject:** RE: DFO review of HEPs 2017 Annual Report  
**Attachments:** 2018-12-18\_DFO\_Confirmation\_2017Report+NewBrightonCredits\_Accepted\_r1.pdf

Yep – here you go. Re-issued today's date. Sorry about misspelling your name!

Isn't automation using letter template and pdf's to Xerox supposed to make things easier? Geeez! Yes, you were missing a page.



S.

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**From:** Olson, Charlotte [mailto:Charlotte.Olson@portvancouver.com]  
**Sent:** 2018–December-17 4:04 PM  
**To:** Thorpe, Suzanne  
**Cc:** Ruffo, Gord; Nutton, Byron  
**Subject:** RE: DFO review of HEPs 2017 Annual Report

Hi Suzanne,  
Thanks for this, I really appreciate you following up on this.

A couple quick comments on the letter:

1. It appears page 2 of the letter is missing content which refers to the actual NBP credit values presented in our annual report, did you intend to include numbers after page 1 – or are you missing an attachment? It appears to be accidentally cut off at the end of page 1 (which is labelled page 2)
2. My name is spelled incorrectly (Olson)
3. The acronym for our program accidentally has a “B” in it – it is Habitat Enhancement Program (HEP), minor but worth a mention!

#2 and #3 are fairly minor, but perhaps #1 may be a mistake, perhaps you can consider a reissue of the letter?

Thank you

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

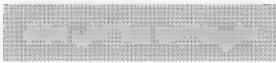
**From:** Thorpe, Suzanne [mailto:Suzanne.Thorpe@dfo-mpo.gc.ca]  
**Sent:** Monday, December 17, 2018 3:31 PM  
**To:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** DFO review of HEPs 2017 Annual Report

s.19(1)

Hi Charlotte;

Please find attached DFO's letter in response to VFPA's submission of the Habitat Enhancement Program's 2017 Annual Report.

Should you have questions or concerns, please contact me.



**Suzanne Thorpe**

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
Government of Canada/ Gouvernement du Canada  
200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512

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Fisheries and Oceans  
Canada

Pacific Region  
Suite 200 - 401 Burrard Street  
Vancouver, British Columbia  
V6C 3S4

Pêches et Océans  
Canada

Région du Pacifique  
Pièce 200 - 401 rue Burrard  
Vancouver (C.-B.)  
V6C 3S4

December 18, 2018

Your file / Votre référence  
VAN048-10299H-001

Our file / Notre référence  
12-HPAC-00002

Vancouver Fraser Port Authority  
Charlotte Olson, P. Geo, PMP  
Manager, Infrastructure and Development  
100 The Point, 999 Canada Place  
Vancouver, BC V6C 3T4

Dear Charlotte Olson:

**Subject: Confirmation of Habitat Credit Deposit to the Vancouver Fraser Port Authority Habitat Bank**

The Fisheries Protection Program of Fisheries and Oceans Canada (DFO) has reviewed the Vancouver Fraser Port Authority (VFPA) *Habitat Enhancement Program (HEP) 2017 Annual Report*, submitted January 2018. The report summarizes the habitat banking related activities undertaken by VFPA in partnership with DFO in 2017, provides updated ledger and habitat balance information, includes VFPAs HEP anticipated program projects for 2018-2020, and outlines habitat banking management issues and opportunities that were identified during the 2017 year.

DFO generally accepts the findings of the report and has determined that the habitat balances are consistent with our records. DFO will continue to work in partnership with VFPA toward a renewed Habitat Banking Arrangement during the 2018-19 fiscal year. It is expected that the new arrangement will address the management issues brought forward in the 2017 report, including, the third party transfer of credits, land tenure, the effective period of validity for the Arrangement, and the use of habitat credits. Since the report was written, VFPA and DFO have worked cooperatively on these issues and on early Indigenous Engagement and Consultation processes pertaining to habitat banking.

With regard to VFPAs projects, DFO acknowledges that the VFPA-Polygon Homes Cates Park Habitat Restoration project was completed in July 2017, but that VFPA will include this project in the 2018 Annual Report to DFO.

As detailed in Appendix B of the report, DFO also acknowledges the completion of the New Brighton Park Shoreline Restoration project in 2017. DFO confirms that this project conforms to the Fisheries Productivity Investment Policy as an offsetting project and that the total habitat credits in the habitat bank have been registered, as follows:

Canada

12-HPAC-00002

- 2 -

<b>Marine Tidal Habitat – total 4,897 m<sup>2</sup></b>		
	Salt marsh	1,890 m <sup>2</sup>
	Tidal mudflat	961 m <sup>2</sup>
	Tidal channel	1,645 m <sup>2</sup>
	Cobble/ boulder beach (marine)	401 m <sup>2</sup>
<b>Marine Riparian Habitat – total 4,975 m<sup>2</sup></b>		
	Riparian - Dune grass	1,889 m <sup>2</sup>
	Riparian – Shrub/ trees*	3,086 m <sup>2</sup>
	<b>Total</b>	<b>9,872 m<sup>2</sup></b>

\* up to 30m from HHWM

The total credit values outlined above are based on the monitoring conducted by VFPA for the 2017 Annual Report. It is noted that the numbers presented above may be subject to change based on changing environmental factors. Also in this regard, the value of habitat credits will be subject to confirmatory field monitoring prior to the withdrawal of any credits from the Habitat Bank, as per the 2012 *Working Agreement Concerning Procedures of Development and Operation of the Port Metro Vancouver Habitat Bank* (the “Working Agreement”), under which this project was undertaken.

As per previous correspondence from DFO to VFPA (*Pulvermacher to Ruffo, dated 2015-05-15*), DFO confirmed that the following VFPA projects are eligible for the habitat bank per the terms of the Working Agreement:

- Tswawassen Eelgrass Project
- South Arm Jett Tidal Marsh Project
- Westham Island/ Canoe Pass Tidal Marsh
- McDonald Tidal Marsh
- Point Grey Tidal Marsh

It should be noted that while eligible, these projects are subject to confirmed feasibility studies and project designs, regulatory review outcomes, First Nations engagement and consultation, land tenure confirmation, as well as confirmation of other project specifications as may be required prior to construction.

The Maplewood Marine Restoration Project, which has been identified by VFPA as a priority for 2018-2019, and the secondary potential restoration project at Sturgeon Bank, will be further discussed and considered for potential inclusion in the habitat bank once further project details are available.

VFPA is reminded that the habitat bank does not in and of itself constitute pre-approval or Authorization for any future serious harm to fish as defined under the *Fisheries Act*, nor does the project confirmation constitute exemption from the provisions of the *Fisheries Act* or any other legislation or regulation that may apply to the project undertaking.

If you have any questions, please contact me.

12-HPAC-00002

- 3 -

Yours sincerely,



Suzanne Thorpe  
Sr. Habitat Biologist  
Fisheries Protection Program  
Tel: 604.666.3512

cc. Gord Ruffo, VFPA  
Byron Nutton, DFO

No information has been removed or severed from this page



## Thorpe, Suzanne

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**From:** Smith, Shona  
**Sent:** Wednesday, December 19, 2018 1:53 PM  
**To:** Thorpe, Suzanne; Nutton, Byron  
**Subject:** RE: VFPA Consultation Record of Discussion (2018-12-10 meeting)  
**Attachments:** 2018-10-16-VFPA-DFO Consultation with Aboriginal Groups - DFO\_revised\_SUMMARY.docx

Hey Suzanne,

I just have a couple comments on this one. I am not sure where they fit in, exactly, but have taken a guess.

### Shona Smith

Client Liaison and Partnerships Coordinator, DFO  
Tel: 250-756-7256

---

**From:** Thorpe, Suzanne  
**Sent:** 2018-December-10 3:27 PM  
**To:** Nutton, Byron  
**Cc:** Smith, Shona  
**Subject:** VFPA Consultation Record of Discussion (2018-12-10 meeting)

Byron/ Shona;

I am sending you the DFO-edited version of the Record of Discussion for the October 16<sup>th</sup> meeting. Please review/  
*comment.*

I also have a marked up "in-between" version but this is the final and you should have the original (but I've reattached it). Please review. Since the Port felt fairly strongly the transcript-type approach was reasonable, I know their staff will be looking for things that we neglected to include so I have tried to ensure I've captured specifics that were said that may be relevant to Aboriginal Rights and Title. I tried to be thorough, but still pare everything down to just the salient points.

This was the long 14-pager of records. The Sept 11<sup>th</sup> meeting was only 7-pages so should be easier to capture. I can do this asap – based on this last one it will probably take me most of day tmo to finish (I know that seems ridiculous but this one took me a WAY longer time to revise than I originally thought it would!).

Let's discuss so we can get these off to the Port asap!

### Suzanne Thorpe

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
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200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512



#### **VFPA-HEP & DFO Consultation with Aboriginal Groups on:**

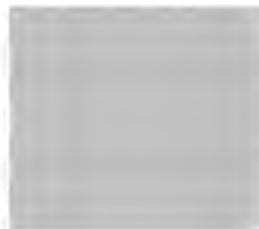
- VFPA-HEP's Consultation Process for Habitat Banking Projects (VFPA)
- Overview of Proponent-led Habitat Banking (DFO)

**Date:** Tuesday, October 16, 2018

**Time:** 9:00 a.m. to 1:30 p.m.

**Location:** Brentwood Bay Resort, Brentwood Bay

#### **Participants:**



Jemma Scoble, VFPA  
Sinead Deery VFPA  
Charlotte Olson, VFPA  
Gord Ruffo, VFPA  
Hemmera

Byron Nutton, DFO  
Suzanne Thorpe, DFO  
Shona Smith, DFO

#### **Agenda:**

- | #  | Item   |
|----|--|
| 1. | Introductions  |
| 2. | VFPA Presentation <ul style="list-style-type: none"><li>• Objectives of Information Session</li><li>• Overview of VFPA's Habitat Enhancement Program</li><li>• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li><li>• Project example: New Brighton Park Shoreline Habitat Restoration Project</li></ul> |
| 3. | DFO Presentation <ul style="list-style-type: none"><li>• Requirements for Fisheries Act Authorizations</li><li>• Proponent-led habitat banking</li><li>• Habitat banking arrangements</li></ul>  |
| 4. | Questions and General Discussion   |

#### **Documents Provided:**

**s.19(1)**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. Overview of Proponent-led Habitat Banking (DFO presentation)
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

### Summary of Discussions:

An overview of the Habitat Enhancement Program was provided by VFPA. VFPA has had a banking agreement with DFO for the last 5 years and the purpose of the meeting is its renewal.

<VFPA presentation>

A question was asked regarding the word "balance" and what that means to VFPA; whether the port intends to incorporate previous development into finding balance? Clarity was also sought about measuring such balance between infrastructure today and providing a healthy environment, specifically referring to measuring thresholds and confirming "balance". VFPA responded that they generally focused on improving areas that were previously affected (e.g., log debris from booms) and that they consider past/future development and opportunities to restore previously affected areas in order to try to balance impacts from development.

A question was asked about the types of partnerships that VFPA forms with organizations, aside from the habitat banking partnership with DFO. VFPA responded that they have many partnerships and they actively look for opportunities to partner with others. As an example, VFPA pointed to work with PSF related to eulachon on the Fraser.

Comments were made regarding municipal projects, and the level of authority that VFPA and DFO have over such projects when First Nations have concerns about them. VFPA indicated that they try to align with municipalities, when possible but that there are often other factors and priorities that are taken into consideration. DFO advised that they don't have authority over municipalities per se, but that when there is opportunity for habitat restoration, that there is effort to try to link and resolve interests between parties.

Concerns were raised regarding local government allowing effects on habitat due to development, and a desire for DFO to address it. DFO responded that with the new changes to the *Fisheries Act*, there would be opportunity to be (re)involved in integrated planning processes, rather than just considering serious harm to fish, which is a reactive and legislative approach. DFO encouraged engagement on the *Fisheries Act* review.

Additional note: many municipalities have their own environmental departments and by-laws and regulations to support environmental protection within their land boundaries. DFO reviews municipal projects that are likely to result in serious harm to fish or fish habitat but these only account for a small percentage of projects that are undertaken. The province of BC also has regulations that may pertain to municipal projects.

Advice was given to VFPA and DFO that project monitoring (data and results) is of interest to First Nations, as well as determining what obstacles are needed to be overcome to enable a restoration project (e.g., dealing with geese issues at Glenrose). It was also indicated that project monitoring needs to be reported with context of the long term benefits and indicator targets (e.g., reports of fish). VFPA agreed and indicated that post construction updates and reporting is important and advised that this information is shared with interested First Nations. VFPA advised they will continue to improve on the reporting and sharing information.

Concerns were raised regarding monitoring undertaken on restoration projects. There is a need to understand what monitoring is being undertaken and for what purposes.

There was broad discussion about the quantitative analysis and qualitative analysis undertaken to support VFPA's restoration projects. VFPA indicated that monitoring results reports are prepared each year and that measures are taken to accelerate the recovery of

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

habitat and prevent any impacts to restored habitats. To date, VFPA's monitoring has largely been based on standard methodologies and generally, plant-based indicators. There is opportunity to modify the program in place and consider other targets and factors as the program develops. DFO indicated that the habitat program is proponent-led so the indicators and measures are generally proposed by the proponents for acceptance by DFO, and that proponents are responsible to show restoration success prior to the project being accepted for use in a habitat bank as credit.

Concerns were raised regarding project placement (location) and the surrounding conditions (e.g., water quality issues). There was discussion about the choice and establishment of projects, and ensuring projects are located where there is a strong likelihood of success and/or in addressing habitat that is lacking in certain areas, or other limiting factors. As well, VFPA and other agencies consider project benchmarks. This relies on research regarding project feasibility as well as other studies. VFPA advised that there is a fundamental basis of scientific research needed and a high degree of comfort that the background research is right, as it guides what projects are technically feasible.

Concerns were raised about shellfish closures, contamination and the use of water for cultural reasons, as well as concerns about levels of bacteria and its resulting effects on people. Dredging and industrial development concerns were also raised.

The importance of indicator species (crab, sea urchin) to First Nations was brought forward, as well as the need to ensure sustainable food-based ecosystems to support First Nations food fisheries and rights to harvest. The water being "alive" is an important concept.

Concerns were also raised regarding industries that cause impacts and those industries not having a role to restore/ rehabilitate the areas used. VFPA acknowledged this, but also indicated that they can only address areas within which the port has administration. VFPA discussed the positive merits of working in partnership for restoration projects and advised about how they are trying to set positive examples of successful projects with municipal and public support that other industries can consider in their restoration efforts (e.g., New Brighton Park). VFPA discussed the projects developed on port land and advised that studies are completed to ensure that impacts are avoided as best as possible. VFPA noted that the new projects do not address past effects, per se, but moving forward through the Habitat Enhancement Program they are ensuring that any new impacts are fully mitigated and/ or offset. DFO advised that with regard to past impacts, that the federal government has salmon enhancement funding opportunities available and that the new proposed legislation and upcoming funding opportunities may result in an increased mandate for undertaking additional restorative work.

A concern was raised about a project severely impacting Tsartlip's estuary, where eelgrass and fish passage across a dam were/are purportedly affected by stream restoration works. First Nations expressed that those proponents with funding should have some level of responsibility for these types of projects.

VFPA indicated that their main source of funding is from capital infrastructure at the port and that they are building habitat in advance of port development.

There was discussion on the willingness and capability of VFPA to complete offsets/ habitat banking outside of the Lower Mainland and VFPA indicated that they would be open to consideration of projects within their service area, and on Vancouver Island. First Nations would like to have some projects considered near the Nanaimo River estuary and in the Fraser River (specific to the South Arm). Further engagement will be needed to flesh out potential considerations and understand what projects First Nations would recommend. VFPA advised that they are considering opportunity for a large proposed project referred to as the "South Arm Jetty", which may have potential restoration opportunity over 30-40ha

**Commented [A1]:** Specifically, a statement was made regarding the importance of the density of eelgrass being an indicator rather than a broad statement about the importance of eelgrass. (not sure if it fits in here or somewhere else)

Question: what is the standard? A suggestion was made that perhaps VFPA indicators should include a healthy ecosystem approach rather than comparison to a reference site that may not be a healthy ecosystem or act as a good indicator.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

but that as with any project, there are challenges due to land use and other infrastructure limitations.

First Nations requested review of project ideas and recommendations that are not currently listed by VFPA, and broadly indicated support for restoration projects in general. There is a desire by Indigenous groups on Vancouver Island to specifically consider proposals for projects on the Fraser River. Concerns were also raised about log storage/ removal, dyking. VFPA advised that they have discussed dyking issues with some municipalities and considering if there may be opportunities to protect/ enhance habitat, as well as consider implications due to sea level rise.

First Nations discussed the challenges in bringing forward discussion on First Nations history and way of life. Their history dates far back and their legacy defined through stories about how people would travel up the Fraser and camp; and this includes stories of how fish were bought from First Nations right off their boats, and of women roasting ducks harvested from local marshland areas. First Nations wants people to know that sea asparagus is edible and that it provides habitat. The interconnectedness of species and habitat is important and has purpose; there are food web linkages, for example, from barnacles to other animals. A high importance is placed on teaching and legacy. There is a desire for certain kinds of "legacy projects", to teach others and leave a legacy for young people via engagement in these projects – through pictures and through understanding their culture and history.

<Break>

VFPA discussed the involvement of First Nations in projects and the consultation process undertaken to identify priorities (e.g., for New Brighton: ecological signage including traditional knowledge for education, cultural recognition).

VFPA also discussed the need for maintenance and monitoring when habitat is built.

There was an inquiry about accounting for climate change and VFPA advised that it is addressed in the design phase, especially since most of their habitat restoration is located in areas having coastal/tidal influence. A follow up inquiry was asked about the protection of restoration habitat(s) after they are established. VFPA responded that the restoration areas are designated conservation under a land use plan. There are protections in place overall for fish habitat, per the *BC Fish Protection Act* and the federal *Fisheries Act*.

<DFO presentation> "Overview of Proponent-Led Habitat Banking"

DFO advises that they will be presenting information on the policy that supports the habitat banking policy as per current legislation. DFO noted that the *Fisheries Act* review and possible amendments are in progress through Parliament but that while the language of the Act may change, the general principles of protecting fish habitat are unlikely to change and there is still expected to be habitat banking defined in the Act.

A comment was made that when referring to guiding principles (#1) that they seem to be supportive of commercial fishery. Questions were asked regarding "Where do First Nations priorities fit in here? What are the local restoration priorities?" A recommendation was made that there should be a separate guiding principle to offset in a way that supports First Nations cultural values. DFO clarified that the guiding principle (#1) includes First Nations fisheries, and is not meant to preclude any type of fisheries.

A follow up question was asked regarding guiding principle #2 regarding how offsetting measures would "balance" project impacts and what that means. DFO responded by clarifying that the guiding principles are national principles specific to the offsetting guidance and process. If DFO contemplates issuing an authorization for serious harm to fish, there is counterbalancing/offsetting of that harm. There was some discussion regarding the process of effects assessment, residual impacts and offsetting those residual

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

impacts, noting that site specific assessments are undertaken to try to understand impacts and offset them.

A question was asked about whether or not DFO works with First Nations directly to understand the impacts? DFO confirmed they do work with First Nations to understand impacts and noted there are 2 parts to habitat banking: i) building habitat prior to building projects requiring offsetting and, ii) issuing of an authorization from DFO for an impact. There is engagement and consultation on all of these aspects.

A question was raised on whether or not New Brighton Park was offsetting a specific development. DFO responded that that New Brighton was not an offset for a specific development but that habitat banking means you are building the offset up front. At some point down the road, there might be a development that causes an impact and VFPA would apply to use the bank if applicable to their project. Habitat banking is not a typical approach where you build habitat to offset a specific project.

There was discussion regarding use of the term "conservation" around habitat banking. DFO noted that it is a term used in the policy document to distinguish between a habitat development project and an offsetting project. First Nations noted that there may be concerns with the term because Aboriginal rights can be set aside in favour of conservation; they feel the reference needs to be changed. New Brighton Park shouldn't be considered a conservation project; rather it should be described as a habitat enhancement project. This is important in relation to Aboriginal rights and title interests. There is also strong concern that a proponent may unduly sway the Crown in terms of habitat banking project use. The concern is that proponents have a "bank" they can automatically draw from, with construction down the road. DFO noted the terminology concern and also advised that *Fisheries Act* may change; however, the new Act is likely to be supportive of habitat banking. The information we have is that the proposed Act is likely to take elements of the policy and bring it into the new *Fisheries Act* on a more formal basis as a way to deal with offsetting.

Concerns were raised regarding the overall concept of habitat banking and that it could be used to unduly sway the Crown to grant an Authorization (if habitat is already banked).

A general concern was also raised by First Nations regarding a need for addressing dyking on the south arm of the Fraser River at a strategic/ innovative level. First Nations are very connected to this land, and its water and resources; as well, it affects several aboriginal fisheries. There is a need for DFO to help to deal with fisheries issues in the area. DFO noted the concern and committed to bring this up to other sectors in the Department. DFO advised that efforts are being made to try to balance benefits of habitat banking (i.e., doing things up front) to make sure that down the road, when it is being used to offset, there is a really clear understanding of the specific benefits of the banking project to balance the impacts of the project. It was further noted that having a habitat bank doesn't guarantee that you will receive an authorization as the impacts would be evaluated separately from the offsetting.

Concern was raised that DFO doesn't say "no" to projects. Examples of projects where DFO has not granted an authorization were briefly discussed (e.g., Fish Lake (Taseko)). DFO explained that even if an authorization isn't denied, proponents often 'cut their losses' earlier in the review process, so a project review doesn't often conclude by 'denying' an authorization. Such projects are often rescinded by proponents then sometimes resubmitted after having been relocated or revised. Regulatory staff review the projects and apply standard mitigation measures to avoid impacts. There is reliance is on consultants, as professionals, to design a project to avoid/mitigate impacts to fish and fish habitat.

Under the new *Fisheries Act* there a public registry of projects is proposed.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Concerns were noted regarding Atlantic fish farms.

Additional habitat bank concerns were raised about the projects being discussed being tied to specific locations - that DFO was requesting acceptance of impacts in relation to those projects at this time.

*Additional note:* DFO is not undertaking any projects-specific consultations to exercise any legislative authority under the Act at this time. The intent of this meeting was to discuss the VFPA-DFO arrangement that may enable future projects, and determine how First Nations would like to engage on habitat banking.

DFO clarified that consultation will be completed when the impact is proposed and that consultation for a Fisheries Act authorization is required when DFO contemplates a decision under the Act. This is what the Fisheries Protection Program does. DFO consults on the impacts being proposed and on whether all the avoidance/mitigation measures have been applied, and what should be done to offset impacts. Although there is some uncertainty around offsetting (i.e., is it functioning or not?), the intention of habitat banking is that there is benefit from having certainty of whether the habitat is functioning and productive.

There was discussion on habitat creation; land-based vs habitat created in the ocean. DFO indicated that habitat creation is somewhat different than restoration. Restoration is the rehabilitation of something which was previously fish habitat that may have been lost, whereas habitat creation is about creating something new. The intention of habitat banking is to create and improve net benefits to fish.

There is a strong desire from First Nations to be brought in early to discuss habitat banking at the forefront when habitat banking is being planned, not just when there is a project requiring consultation. With regard to "habitat" it needs to be recognized that you can't create habitat, you can only change habitat and that you are displacing something to create habitat, whether or not it is land-based and that, too, needs to be accounted for. There were questions regarding when consultation effort was undertaken by DFO in regards to habitat banking. DFO confirmed that the federal legal consultation requirement is as part of a permitting authority.

There was some discussion on what this means. DFO advised that if there is no serious harm to fish that proponents would not need authorization - prior to building some types of habitat banking projects (i.e., if the project was land-based). For New Brighton Park, VFPA were digging a hole in the park. The park wasn't providing a benefit to fish, now it is. It did not require a *Fisheries Act* Authorization.

Concern was expressed regarding this approach to habitat banking and the need for authorization for the New Brighton Park project as it is attached to a major water source. From a First Nations perspective, the area is occupied and used and consultation is needed when making those changes.

There was discussion on consultation. Concerns were expressed that the Nations present aren't being sufficiently consulted. It was expressed that Aboriginal rights and title (under the Douglas Treaty) are perpetual and that the First Nations need to preserve their relationship with the Crown and ensure they do not fetter those rights. Habitat banking should be viewed under a full-spectrum lens to ensure consultation is fulsome and adequate.

DFO noted that while habitat banking in concept isn't new, that the point of meeting now is to advise that the Port has a habitat bank, that the bank agreement is being renewed and as well, to understand what the concerns around the VFPA bank are. It is not intended this to be consultation on the overall system of habitat banking, although those concerns will be noted.



## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Participants advised that they haven't been included in previous conversations on habitat banking and that in light of reconciliation, First Nations communities should be included in all decision making relevant to their lands, waters, resources including those regarding habitat banking. Habitat banking needs to be discussed at the point that projects are being initiated. First Nations expressed their desire to be involved in decision-making and in setting goals together for habitat banking that are acceptable to First Nations. Traditional knowledge should be considered, with the end goal of consumption in mind.

VFPA responded that they will discuss the development of objective measures and the incorporation of First Nations into project planning and project development. They advised that the projects recently completed were improved due to working with First Nations from the beginning. VFPA advised that they want to know how to implement this and work with Nations and determine what that looks like [for each nation]. The proposed process presented is a starting point, and VFPA is seeking advice on defining and creating the path forward.

VFPA and DFO acknowledged that there may be a need for further discussions on habitat banking projects. These discussions are on the current proposed arrangement between VFPA and DFO, which is a high level arrangement that isn't specific to projects at the ground level. The arrangement itself is about how to manage, build and deliver on habitat banking projects. Processes for seeking input on projects and gaining input are not concluded, and this approach is to gather input from the beginning to inform later stages and determine how Nations wish to be engaged/ consulted.

First Nations consider it a significant issue that they feel they are forced into a pre-approval, pre-consultation environment for habitat banking – not specifically in relation to VFPA but in general. There is a strong desire to understand what all of the projects are, what projects will be proposed or put forward ahead of others and why. The process is as important as the outcome decisions for habitat banking projects and this is very important.

There was discussion on the Douglas Treaty as First Nations advised that the Douglas Treaty has never been recognized by DFO. There is concern that it has not been acknowledged but that DFO wants their consideration for habitat banking. Sentiment was expressed that habitat banking is a way out of infringement and that DFO is justifying infringement on Aboriginal and treaty rights – should call it an "infringement bank". There is a strong desire across all levels of government of good engagement.

VFPA and DFO committed to follow up with attendees and provision of summary notes. Consideration will be given to a follow up meeting should attendees wish to have further discussion regarding issues that were brought up, and on the processes and proposed DFO-VFPA habitat banking arrangement.

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**From:** Nutton, Byron  
**Sent:** Wednesday, December 19, 2018 2:04 PM  
**To:** Thorpe, Suzanne  
**Subject:** Banking engagement summaries  
  
**Importance:** High

Hey Suzanne,

Please have a look at my comments below and send me an Outlook invite for a ½ meeting to discuss sometime that works for you tomorrow AM – my calendar is up to date (and I think I might actually join the Party this afternoon).

I see that Shona has sent you specific comment on Brentwood Bay – in the interest of time I asked her to simply ensure that any specific notes she took during the meetings are reflected in the summaries.

I only did a quick scan of the original transcripts from VFPA, but a bit more thorough read of your summaries. Overall I do like your summary better than the transcripts, but wonder if they could still use a polish or even a bit of a restructuring by theme rather than just chronology. Shona made a similar overall comment to me. However, at this point I think it is worth sending them back to VFPA for their thoughts, perhaps with a bit of an introduction something like this:

As discussed, I have reviewed the transcript-style meeting minutes you provided and this is not the typical type of meeting summary that DFO provides. I have taken the time to summarize the discussion, while trying not to lose the content. At this point these summaries are still chronological, following the discussion at the meetings. Typically DFO might even go a step further to summarize the overall discussion into topics or themes, so that the key issues/topics are clear and concise, and easy to reference and track. However, at this point we thought it worth sharing these drafts with you (even in this format they might even need another editorial review and a bit more polish) to seek your thoughts.

In addition, please see the list of “actions” that I pulled from the meetings...does this match up with your sense of what we need to address in order to move forward with renewing the arrangement?

#### Vancouver

- VFPA to provide 2018 New Brighton monitoring report when it is completed
- VFPA/DFO to provide summary of the meeting for review and feedback

#### Brentwood bay

- DFO to re-consider the use of the term “conservation project”
- DFO to take forward message internally regarding Fraser River – concerns regarding impacts, highlighting dyking, and perspective that more restoration needs to be done
- DFO to take forward message internally that consultation/engagement on any new regulation, policy, etc. related to habitat banking is expected
- VFPA/DFO to provide summary of the meeting for review and feedback

#### Chilliwack

- DFO to ensure that FPP is aware of the federal consultation network
- VFPA/DFO to provide summary of the meeting for review and feedback

General

- VFPA to ensure early engagement on habitat banking planning and projects
- DFO to take forward message internally that Indigenous groups are interested in habitat banking and expect consultation/engagement on any new regulation, policy, etc.

Cheers,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices

Fisheries Protection Program | Programme de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

250-618-4268

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**From:** [Nutton, Byron](#)  
**To:** [Assier, Gilles \(Gilles.Assier@portvancouver.com\)](#)  
**Cc:** [Magnan, Alain; Hwang, Jason; Olson, Charlotte - Charlotte.Olson@portvancouver.com - \(Charlotte.Olson@portvancouver.com\)](#)  
**Subject:** FW: VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up  
**Date:** 2018-December-20 3:15:00 PM  
**Attachments:** [RE VFPA DFOs Consultation on VFPAs Arrangement for Habitat Banking - Timelines - Update Dec 17.msg](#)

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Hi Gilles,

I understand from Al that you and he have not been able to connect – you may yet do so, but in the meantime please see the attached e-mail that I just sent to Charlotte regarding the status the outstanding items on our workplan towards renewal of the VFPA Habitat Banking Arrangement.

Also, I would like to introduce you to Jason Hwang, copied on this note. We are undergoing a gradual transition towards a new organizational structure, and while I will continue to lead our work on habitat banking I will now be reporting to Jason instead of Al. Al will be continuing as the Manager of Regulatory Reviews, but some of his other responsibilities have been shifted to Jason who has recently been appointed as the Manager of our new Integrated Planning Unit, a new element of our program. Although all the details are being sorted out, Jason's portfolio will include things such as aquatic invasive species, planning, integrated management and regional co-ordination, including habitat banking.

I hope you are able to take some time off to enjoy some holidays, and I look forward to continuing to work with you and your team in the New Year.

Regards,

*Byron Nutton, RPBio*

A/Team Lead | Chef d'équipe Intérimaire  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

**From:** Magnan, Alain  
**Sent:** 2018-December-18 1:26 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>; Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up

Hi Jason and Byron,

Please find attached a request from VFPA on moving the habitat banking arrangement forward. If you could respond back to Gilles that would be great.

Thanks.

Al

**From:** Assier, Gilles [mailto:[Gilles.Assier@portvancouver.com](mailto:Gilles.Assier@portvancouver.com)]  
**Sent:** December-18-18 11:46 AM  
**To:** Magnan, Alain  
**Subject:** VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up

Hi Al,

Hope you are doing well.

There are a few open items related to the new Habitat Banking Arrangement that could be preventing us to reach a signed agreement before the deadline of March 2019. Could you please discuss with Byron the open items below and see how he could prioritize those?

1. Provide written comments on the Habitat Bank Arrangement draft that VFPA sent on August 14/18 to DFO – the only thing we have received was a short email from Byron on Oct 31, verbal re-assurance that the document was fine, and last week a very short email confirming we could share the draft with TWN. We need comments or a confirmation the draft is fine.
2. We need confirmation about the proposed timelines sent by Charlotte on Nov 20, to confirm we will be able to achieve a new Arrangement by March 2019. See below.
3. Comments on the first 2 Indigenous meeting notes provided for review is outstanding (e.g. Sept 11 & Oct 16)

The tasks associated with finalizing this consultation process and the proposed dates for each task are as follows:

• November 30, 2018	DFO to provide comments and edits to VFPA on meeting notes from Sept 11 and Oct 16 sessions
• December 4, 2018	VFPA to provide draft meeting notes to DFO from Nov 29 session
• December 11, 2018	DFO to provide comments and edits to VFPA on meeting notes from Nov 29 session
• <b>December 21, 2018</b>	<b>VFPA to submit draft report titled “Summary of Indigenous Engagement on VFPA and DFO’s Habitat Bank Arrangement” to DFO for review and comment</b>
• January 18, 2019	DFO to provide comments to VFPA on draft report

- |                    |   |
|--------------------|---|
| • January 31, 2019 | VFPA issues final report to Indigenous groups and DFO |
|--------------------|---|

Thanks,

Gilles

Office/Cell: 604-665-9078

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**Boutillier, Jaclyn**

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**From:** Nutton, Byron  
**Sent:** Thursday, December 20, 2018 3:09 PM  
**To:** Olson, Charlotte  
**Cc:** Thorpe, Suzanne  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Update Dec 17

Hi Charlotte,

After some delays on my end providing feedback to Suzanne, she will be forwarding comments on the notes from all 3 meetings either later today or early tomorrow. I understand that she has already spoken to Jemma about formatting, but I suspect we may want to discuss further.

I'd also like to acknowledge receipt of the draft summary report yesterday. I have not had a chance to look at it yet but will review and comment as soon as possible, and well ahead of the January 18 date proposed in your timeline.

I am interested in better understanding a path forward with TWN. My understanding from our last DFO-VFPA-TWN meeting was that the three of us would have a follow-up session. I am encouraged that you are continuing to work with them, but in order to complete our overall engagement on the arrangement renewal DFO will need to close that loop. Please let me know your thoughts on how to achieve this.

Like you, I am here tomorrow and then away until January 2<sup>nd</sup>. Perhaps we should schedule a time to discuss later that week...I could make anytime after 10:00AM on Friday, January 4<sup>th</sup>. If that sounds reasonable to you, please send Suzanne and I a meeting invite.

I hope you enjoy your time off and look forward to seeing you in the New Year.

Regards,

Byron

**From:** Olson, Charlotte [mailto:Charlotte.Olson@portvancouver.com]  
**Sent:** 2018-December-17 4:20 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Update Dec 17

Hi Byron, sorry for the delay on responding here – it was a full week last week!

We had a good meeting with TWN on December 12<sup>th</sup>, and I have shared a copy of the August 14/18 version of our DRAFT DFO-VFPA Arrangement with them (as they had requested). It was clearly marked DRAFT, thank you for providing the OK to share.

With regards to your question below, as of last week, TWN has not specifically asked for a DFO-VFPA-TWN meeting at this time in relation to our new Arrangement.  
As a specific update for you in this regard, please note that we are working directly with TWN on a separate VFPA-TWN Agreement. This is progressing.

Per my other notes below, we are also still on track to provide DFO (you) the draft "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" by the end of this week, we will be looking forward to your feedback on the draft in January.

Please call if you'd like to discuss anything before the holiday break, I am here till Friday (Dec 21), then back on Wed Jan 2.

Warm Regards,

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

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## Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Thursday, December 20, 2018 4:48 PM  
**To:** Nutton, Byron  
**Cc:** Thorpe, Suzanne  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Update Dec 17

Great, thank you Byron – I really appreciate the follow up.

Yes, absolutely, I am available for a call on Friday Jan 4<sup>th</sup> – I will send an Outlook invite to you both, and we can discuss your comments below RE TWN. Best of the season to you both! Charlotte



**From:** Nutton, Byron [mailto:Byron.Nutton@dfo-mpo.gc.ca]  
**Sent:** Thursday, December 20, 2018 3:09 PM  
**To:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Cc:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Update Dec 17

Hi Charlotte,

After some delays on my end providing feedback to Suzanne, she will be forwarding comments on the notes from all 3 meetings either later today or early tomorrow. I understand that she has already spoken to Jemma about formatting, but I suspect we may want to discuss further.

I'd also like to acknowledge receipt of the draft summary report yesterday. I have not had a chance to look at it yet but will review and comment as soon as possible, and well ahead of the January 18 date proposed in your timeline.

I am interested in better understanding a path forward with TWN. My understanding from our last DFO-VFPA-TWN meeting was that the three of us would have a follow-up session. I am encouraged that you are continuing to work with them, but in order to complete our overall engagement on the arrangement renewal DFO will need to close that loop. Please let me know your thoughts on how to achieve this.

 I am here tomorrow  Perhaps we should schedule a time to discuss later that week...I could make anytime after 10:00AM on Friday, January 4<sup>th</sup>. If that sounds reasonable to you, please send Suzanne and I a meeting invite.

Regards,

Byron

s.19(1)

**From:** Olson, Charlotte [mailto:Charlotte.Olson@portvancouver.com]  
**Sent:** 2018-December-17 4:20 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA/DFO's Consultation on VFPA's Arrangement for Habitat Banking - Timelines - Update Dec 17

Hi Byron, sorry for the delay on responding here – it was a full week last week!

We had a good meeting with TWN on December 12<sup>th</sup>, and I have shared a copy of the August 14/18 version of our DRAFT DFO-VFPA Arrangement with them (as they had requested). It was clearly marked DRAFT, thank you for providing the OK to share.

With regards to your question below, as of last week, TWN has not specifically asked for a DFO-VFPA-TWN meeting at this time in relation to our new Arrangement.

As a specific update for you in this regard, please note that we are working directly with TWN on a separate VFPA-TWN Agreement. This is progressing.

Per my other notes below, we are also still on track to provide DFO (you) the draft “Summary of Indigenous Engagement on VFPA and DFO’s Habitat Bank Arrangement” by the end of this week, we will be looking forward to your feedback on the draft in January.

Please call if you’d like to discuss anything before the holiday break, [REDACTED]

Warm Regards,

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

s.19(1)

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**From:** Thorpe, Suzanne  
**Sent:** Thursday, December 20, 2018 4:48 PM  
**To:** Olson, Charlotte; Scoble, Jemma  
**Cc:** Nutton, Byron; Ruffo, Gord (Gord.Ruffo@portvancouver.com)  
**Subject:** Draft revised summary Record of Discussions from Indigenous engagement meetings.  
**Attachments:** 2018-09-11-VFPA-DFO\_Engagement-with-Aboriginal Groups\_Vancouver-DFO\_revised\_SUMMARY.docx; 2018-10-16-VFPA-DFO\_Engagement-with-Aboriginal Groups\_BrentwoodBay-DFO\_revised\_SUMMARY.docx; 2018-11-29-VFPA-DFO\_Engagement-with-AboriginalGroups\_Chilliwack-DFO\_revised\_SUMMARY.docx

Hi Charlotte and Jemma;

As we have discussed, I reviewed the transcript-style meeting minutes provided by VFPA sent for DFO review and comment. As an engagement/ consultation record of discussion, this style of minutes has not been the typical type of meeting summary that DFO provides; however, we do keep the raw meeting notes for our internal records. For your consideration and as an alternative, I have reworked the minutes to summarize the discussions, while trying not to lose content. At this point the summaries are still chronological, and follow the discussions held at the meetings. Typically, DFO might even go a step further to summarize the overall discussion into topics or themes, so that the key issues/topics are clear and concise, and easy to reference and track. However, at this point we thought it worth sharing these drafts with you to seek your thoughts/ comments. We note that even in this format they may need another editorial review. I am happy to further discuss.

There were a number of specific VFPA and DFO follow-up actions that arose from the sessions. To aid in tracking these we have provided a list per below. After cursory review of VFPA's draft Aboriginal Consultation Summary Report\_Rev0 (submitted to DFO, Dec 19<sup>th</sup>), I note that these may also be included in the 'concerns, issues and input received' or other sections of the report.

**Vancouver: September 11, 2018**

- VFPA to provide 2017/ 2018 New Brighton monitoring reports
- VFPA/DFO to provide summary of the meeting for review and feedback

**Brentwood Bay: October 16<sup>th</sup>, 2018**

- Note: interest was expressed in monitoring data and results. VFPA should share 2017/ 2018 New Brighton monitoring reports with all groups.
- DFO to take forward message internally regarding recommendation that offsetting should also take into consideration First Nation cultural values as a guiding principle
- DFO to re-consider the use of the term "conservation project"
- DFO to take forward message internally regarding Fraser River – concerns regarding impacts, highlighting dyking, and perspective that more restoration needs to be done
- DFO to take forward message internally that consultation/engagement on any new regulation, policy, etc. related to habitat banking is expected
- VFPA/DFO to provide summary of the meeting for review and feedback

**Chilliwack: November 29<sup>th</sup>, 2018**

- DFO to ensure that FPP is aware of the federal consultation network
- VFPA to consider opportunities for engagement/ participation in upcoming symposiums and/ or Fraser River Watershed initiatives/ conferences
- VFPA/DFO to provide summary of the meeting for review and feedback

## **General**

- VFPA/DFO to ensure early engagement on habitat banking planning and projects
- DFO to take forward message internally that Indigenous groups are interested in habitat banking and expect consultation/engagement on any new regulation, policy, etc.
- VFPA/DFO offered to undertake additional engagement, should groups wish to, on the habitat banking agreement and/ or habitat banking planning and projects

Please contact me for discussions. I am in tomorrow, but I won't be in office next week either. I anticipate returning on January 2<sup>nd</sup>.

Hope you all have a wonderful holiday with your families.

## **Suzanne Thorpe**

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices

Fisheries Protection Program/ Programme de protection des pêches

Ecosystem Management Branch / Direction de la gestion des écosystèmes

Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique

Government of Canada/ Gouvernement du Canada

200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4

Telephone: (604) 666.3512

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pages 1254 to / à 1261**

**Pages 1382 to / à 1388  
are duplicates of  
sont des duplicatas des  
pages 1263 to / à 1269**

**Pages 1389 to / à 1393  
are duplicates of  
sont des duplicatas des  
pages 1124 to / à 1128**

**Hwang, Jason**

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**From:** Assier, Gilles <Gilles.Assier@portvancouver.com>  
**Sent:** December-21-18 9:46 AM  
**To:** Nutton, Byron; Hwang, Jason  
**Cc:** Magnan, Alain; Olson, Charlotte; Assier, Gilles  
**Subject:** RE: VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement  
Open Item follow-up

Thank you Byron for the details below.

Jason, we are looking forward to be meeting with you in the new year. Al proposed a meeting mid-February to discuss the overall changes at DFO.

In the meantime, we will be reaching out to you at the beginning of January regarding our habitat enhancement program to see if you would like an overview presentation and to discuss the final steps towards signing our new DFO-VFPA (habitat banking) Arrangement. The next steps for this are:

December 21, 2018: VFPA to submit the draft report titled "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" to DFO for review and comment

January 18: DFO to provide written comments on the August 2018 draft Arrangement version provided by VFPA

January 18, 2019: DFO to provide comments to VFPA on the draft Summary of Indigenous Engagement report

January 31, 2019: VFPA to issue the final Summary of Indigenous Engagement report to Indigenous groups and DFO

March: signing of DFO-VFPA Arrangement (Please confirm if you or Cheryl Webb will sign – Cheryl signed the previous agreement)

In parallel, VFPA has been working with TWN to develop a VFPA-TWN agreement on collaboration around habitat development and banking in Burrard Inlet:

Wishing you and your family a wonderful Holiday Season and looking forward to our continued collaboration in the New Year.

Regards,

**Gilles Assier**  
Director, Container Terminal Construction



Vancouver Fraser Port Authority  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604-665-9078 | CELL: 778-231-4394  
[portvancouver.com](http://portvancouver.com)

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**From:** Nutton, Byron [mailto:Byron.Nutton@dfo-mpo.gc.ca]  
**Sent:** December-20-18 3:16 PM  
**To:** Assier, Gilles <Gilles.Assier@portvancouver.com>



Cc: Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>; Olson, Charlotte <Charlotte.Olson@portvancouver.com>

Subject: FW: VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up

Hi Gilles,

I understand from Al that you and he have not been able to connect – you may yet do so, but in the meantime please see the attached e-mail that I just sent to Charlotte regarding the status the outstanding items on our workplan towards renewal of the VFPA Habitat Banking Arrangement.

Also, I would like to introduce you to Jason Hwang, copied on this note. We are undergoing a gradual transition towards a new organizational structure, and while I will continue to lead our work on habitat banking I will now be reporting to Jason instead of Al. Al will be continuing as the Manager of Regulatory Reviews, but some of his other responsibilities have been shifted to Jason who has recently been appointed as the Manager of our new Integrated Planning Unit, a new element of our program. Although all the details are being sorted out, Jason's portfolio will include things such as aquatic invasive species, planning, integrated management and regional co-ordination, including habitat banking.

I hope you are able to take some time off to enjoy some holidays, and I look forward to continuing to work with you and your team in the New Year.

Regards,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

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From: Magnan, Alain

Sent: 2018-December-18 1:26 PM

To: Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>; Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>

Subject: FW: VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up

Hi Jason and Byron,

Please find attached a request from VFPA on moving the habitat banking arrangement forward. If you could respond back to Gilles that would be great.

Thanks.

Al

---

From: Assier, Gilles [<mailto:Gilles.Assier@portvancouver.com>]

Sent: December-18-18 11:46 AM

**To:** Magnan, Alain

**Subject:** VFPA Habitat Enhancement Program - DFP-VFPA habitat banking arrangement Open Item follow-up

Hi Al,

Hope you are doing well.

There are a few open items related to the new Habitat Banking Arrangement that could be preventing us to reach a signed agreement before the deadline of March 2019. Could you please discuss with Byron the open items below and see how he could prioritize those?

1. Provide written comments on the Habitat Bank Arrangement draft that VFPA sent on August 14/18 to DFO – the only thing we have received was a short email from Byron on Oct 31, verbal re-assurance that the document was fine, and last week a very short email confirming we could share the draft with TWN. We need comments or a confirmation the draft is fine.
2. We need confirmation about the proposed timelines sent by Charlotte on Nov 20, to confirm we will be able to achieve a new Arrangement by March 2019. See below.
3. Comments on the first 2 Indigenous meeting notes provided for review is outstanding (e.g. Sept 11 & Oct 16)

The tasks associated with finalizing this consultation process and the proposed dates for each task are as follows:

• November 30, 2018	DFO to provide comments and edits to VFPA on meeting notes from Sept 11 and Oct 16 sessions
• December 4, 2018	VFPA to provide draft meeting notes to DFO from Nov 29 session
• December 11, 2018	DFO to provide comments and edits to VFPA on meeting notes from Nov 29 session
• December 21, 2018	<b>VFPA to submit draft report titled "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" to DFO for review and comment</b>
• January 18, 2019	DFO to provide comments to VFPA on draft report
• January 31, 2019	VFPA issues final report to Indigenous groups and DFO

Thanks,

Gilles

Office/Cell: 604-665-9078

**From:** Olson, Charlotte  
**To:** Nutton, Byron; Thorpe, Suzanne; Ruffo, Gord  
**Cc:** "Gord Ruffo"  
**Subject:** RE: DFO-VFPA Conference Call Meeting on January 4th - ACTIONS  
**Date:** 2019-January-04 4:07:37 PM  
**Attachments:** image001.png  
2019-01-04-03-600-VFPA-HFP-DFO Meeting Actions-Rev0.docx

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Hi again all, thanks for the good discussion this afternoon. As discussed, here are the actions that I recorded – please don't hesitate to respond if anything has been missed or captured in error.

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

**From:** Olson, Charlotte  
**Sent:** Thursday, January 03, 2019 4:43 PM  
**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Ruffo, Gord <Gord.Ruffo@portvancouver.com>  
**Cc:** Gord Ruffo <gord.ruffo@shaw.ca>  
**Subject:** DFO-VFPA Conference Call Meeting on January 4th - AGENDA

Good afternoon Byron and all, happy new year! Hope you all had an excellent and restful holiday time.  
Please find attached a suggested draft Agenda to guide our conference call set for tomorrow (Friday) at 1:30pm.

The call-in number is in the Outlook meeting invite, but also here for your convenience:

- +1-604-449-3026 (Vancouver)
- Attendee access code: [REDACTED]

We can adjust the Agenda as needed at the start of the call.

Looking forward to our discussion tomorrow!, regards.  
Charlotte

s.16(2)(c)

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

s.19(1)



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111

[portvancouver.com](http://portvancouver.com)

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**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**

**DATE:** January 4, 2019 (1:30-2:30pm)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING –** January 24<sup>th</sup> (TBC)

**ATTENDEES:**

**DFO Representatives:**

Byron Nutton (BN), DFO  
Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO)

**CURRENT MEETING ACTIONS (STATUS – updated for Jan 4/19):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
<b>Previous 2018 Meeting Actions:</b>				
1.	DFO (BN) review VFPA's 2017 Annual Reports submitted to DFO. Confirm current Dec 31/17 bank ledger totals, and acknowledge by letter (or equivalent) to VFPA the 2017 habitat credit deposit for New Brighton Park	DFO (BN/ST)	Complete Dec 18/18	This was completed by DFO letter issued to VFPA on Dec 18/18.
<b>2019 Actions:</b>				
2.	DFO to provide comment on the draft "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" report sent to DFO on Dec 19/18	DFO (BN)	Jan 7/19  Jan 18/19	Draft discussed with DFO on Jan 4/19, DFO to send revised Section 6 "themes" for VFPA consideration by EOD Jan 7/19.  DFO to send 'DFO response' content and any other comments on the draft report to VFPA by Jan 18/19.
3.	VFPA to review the 3 revised sets of Meeting Notes as provided by Suzanne T in December	VFPA (CO & JS)	Jan 18/19	VFPA anticipates incorporating the final versions of Suzanne's summaries as Appendices in the final report sent to AGs.

## Habitat Enhancement Program

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
4.	VFPA to incorporate DFO feedback into final draft "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" report and send to AGs	VFPA (CO & JS)	Jan 31/19	VFPA anticipates incorporating the final versions of Suzanne's summaries as Appendices in the final report sent to AGs. JS to also re-look at wording within Section 3 (based on DFO feedback provided verbally on Jan 4/19).
5.	Byron to reach out to [REDACTED] (TWN) regarding DFO's required 'close-out' related to engagement on VFPA-DFO Arrangement	DFO (BN)	Per Byron	
6.	DFO to provide written comments/markup to VFPA on the Aug 14/18 version of the VFPA-DFO habitat banking Arrangement	DFO (BN)	Jan 18/19	In order to achieve a March execution, DFO is requested to respond by Jan 18/19 to VFPA. VFPA will then revise and prepare a final draft Arrangement for DFO final review in early February 2019.
7.	Charlotte to send-out a meeting request series for a call every 2 weeks starting Jan 24/19 through to end of March 2019	VFPA (CO)	Jan 7/19	The group agreed that a bi-monthly (every 2 weeks) call would be helpful to move toward completion of Indigenous engagement, and execution of a proposed new Arrangement by end March 2019.
8.	VFPA to provide DFO with 2018 Annual Report(s)	VFPA (CO)	Feb TBC	
9.	VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)	VFPA (CO)	Feb TBC	VFPA is currently working with TWN to prepare a joint submission to DFO on this aspect, targeted for submittal to DFO in February.

s.19(1)



## Meeting Agenda

### Habitat Enhancement Program

#### DFO / VFPA Liaison Meeting: Conference Call – January 2019

Meeting No. 48

**Location:** Conference Call (VFPA Vancouver Meeting Room)

**Date:** Friday January 4th (1:30 PM– 2:30 PM)

<b>Attendees:</b>	Byron Nutton (DFO)	Charlotte Olson (VFPA)
	Suzanne Thorpe (DFO)	Gord Ruffo (VFPA)

#### AGENDA:

1. Review of Agenda
2. VFPA to provide update to DFO on TWN-VFPA draft Agreement - Discussion
3. Priority Actions & Timelines – to support Arrangement execution by March 2019
  - a) Finalize report, issue, and conclude Indigenous Engagement
    - DFO comments on draft report requested by Jan 18/19
    - VFPA to issue final report to AGs for Jan 31/19
  - b) Develop agreed timeline to execute new Arrangement in Q1 2019
    - DFO written comments on Aug 14/18 version of draft Arrangement (by Jan 18/19)
    - VFPA to target revision and re-issue of final draft Arrangement to DFO by early-mid February
    - DFO and VFPA to execute within March 2019
4. Other Items for Discussion
5. Next Steps/Actions

**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**

**DATE:** January 4, 2019 (1:30-2:30pm)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING – January 24<sup>th</sup> (TBC)**

**ATTENDEES:**

**DFO Representatives:**

Byron Nutton (BN), DFO

Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO)

**CURRENT MEETING ACTIONS (STATUS – updated for Jan 4/19):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
<b>Previous 2018 Meeting Actions:</b>				
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<b>2019 Actions:</b>				
2.	DFO to provide comment on the draft "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" report sent to DFO on Dec 19/18	DFO (BN)	Jan 7/19  Jan 18/19	Draft discussed with DFO on Jan 4/19, DFO to send revised Section 6 "themes" for VFPA consideration by EOD Jan 7/19.  DFO to send 'DFO response' content and any other comments on the draft report to VFPA by Jan 18/19.
3.	VFPA to review the 3 revised sets of Meeting Notes as provided by Suzanne T in December	VFPA (CO & JS)	Jan 18/19	VFPA anticipates incorporating the final versions of Suzanne's summaries as Appendices in the final report sent to AGs.



No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
4.	VFPA to incorporate DFO feedback into final draft "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" report and send to AGs	VFPA (CO & JS)	Jan 31/19	VFPA anticipates incorporating the final versions of Suzanne's summaries as Appendices in the final report sent to AGs. JS to also re-look at wording within Section 3 (based on DFO feedback provided verbally on Jan 4/19).
5.	Byron to reach out to [REDACTED] (TWN) regarding DFO's required 'close-out' related to engagement on VFPA-DFO Arrangement	DFO (BN)	Per Byron	
6.	DFO to provide written comments/markup to VFPA on the Aug 14/18 version of the VFPA-DFO habitat banking Arrangement	DFO (BN)	Jan 18/19	In order to achieve a March execution, DFO is requested to respond by Jan 18/19 to VFPA. VFPA will then revise and prepare a final draft Arrangement for DFO final review in early February 2019.
7.	Charlotte to send-out a meeting request series for a call every 2 weeks starting Jan 24/19 through to end of March 2019	VFPA (CO)	Jan 7/19	The group agreed that a bi-monthly (every 2 weeks) call would be helpful to move toward completion of Indigenous engagement, and execution of a proposed new Arrangement by end March 2019.
8.	VFPA to provide DFO with 2018 Annual Report(s)	VFPA (CO)	Feb TBC	
9.	VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)	VFPA (CO)	Feb TBC	VFPA is currently working with TWN to prepare a joint submission to DFO on this aspect, targeted for submittal to DFO in February.

s.19(1)

## Thorpe, Suzanne

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**From:** Thorpe, Suzanne  
**Sent:** Friday, January 4, 2019 12:19 PM  
**To:** Nutton, Byron  
**Subject:** VFPA's Summary of Indigenous Engagement Report on Habitat Bank Arrangement

Hi Byron;

While it is imperfect, the following list should suffice for this afternoons meeting (i.e., I captured the contents but didn't capture word-for-word what is in VFPA's summary document - but the document could use some refinements anyway). However, I have made an attempt at a broad re-arrangement of the section on "concerns/ issues/ input received" into the categories below. We can word-smith later after our discussions with VFPA staff.

I agree with you that under this approach, a summary brief and our responses can more easily be communicated to Senior Management.

On final review, each of the Consultation-Engagement Information Session meeting notes should be reviewed (again) to ensure that the in-session comments made have been adequately captured per the bullets below. I have completed this in a cursory way, previously and again today, but another bullet-by-bullet-specific review would ensure this list captures everything.

### **VFPA-DFO Habitat Banking Arrangement:**

- Discomfort with language used by DFO in consultation specifically in relation to the term "conservation" – that Aboriginal rights can be set aside in favour of conservation
- Importance of ensuring that constructed project sites are protected into the future
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required [could leave here or place into 3<sup>rd</sup> category]

### **1. Engagement Processes:**

- General support that the HEPs consultation is understood and has been effective
- General support for projects built to date and consultation by VFPA-DFO
- FN desire for involvement in all aspects and phases of HEP projects: provision of input to project ID, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation
- Monitoring including FN values (food quality for consumption), use of Western science and TEK, potential use of DNA analysis to determine stock use
- Sharing of information: collection data, monitoring data. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc)

### **2. Aboriginal consultation and regulatory processes:**

- Consultation concerns: adequacy of consultation at all levels of FN governance (for all aspects of habitat banking, including the policy itself)
- Importance of FN being informed of projects that do not get an Authorization due to impacts
- Concern with DFO's approach to Douglas Treaty Nations and recognition of rights
- Crown swayed to grant Authorizations if habitat is already banked
- Concerns that DFO consultation is completed on project by project basis – one project at a time when Authorization is sought
- Guiding principles for offsetting should include that offsetting be done to also support FN cultural values

- Need for DFO to address broader concerns related to several Aboriginal fisheries
- General perspective that habitat is not “created” but only restored, something is displaced to create new habitat
- Perception DFO approves all authorizations
- Need for using Traditional Knowledge in the evaluation of projects

**3. General scientific, technical and cultural:**

- Request for projects S. Arm Fraser/ Vancouver Island
- Consideration of climate change, sea level rise and flood management
- General interest in shellfish restoration & other food-harvest value species
- Cultural considerations important: intertwine legacy and cultural history into projects
- Cultural loss of marine aquatic species (clam beds)
- Development of educational resources, including FN specific educational aspects and opportunities (important species, cultural history)
- Need for balance: infrastructure development and healthy environment

**4. General state of the environment concerns:**

- Compensation for historic impacts/ damage/ destruction of environment – lack of industry accountability for historic damages/ destruction of habitat
- Need for balance of infrastructure development and environment
- Impacts of dyking on Fraser River
- Fish farms
- Access to and health of marine aquatic species (clam beds) for FN

**5. Other:**

- *Fisheries Act* Review comments not adequately addressed
- Importance of long-term foreshore management planning and VFPA to support this work and other initiatives
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive

**Suzanne Thorpe**

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices

Fisheries Protection Program/ Programme de protection des pêches

Ecosystem Management Branch / Direction de la gestion des écosystèmes

Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique

Government of Canada/ Gouvernement du Canada

200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4

Telephone: (604) 666.3512

**From:** Olson, Charlotte  
**To:** Nutton, Byron; Scoble, Jemma  
**Subject:** RE: meeting minutes  
**Date:** 2019-January-07 2:41:07 PM

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Hi Byron, as discussed with Jemma this morning – no formal meeting notes were circulated following the May 2018 meeting with you and TWN.  
Let us know if you need anything further, and we look forward to your comments on the draft report (e.g. themes, and DFO content as discussed last week).  
Thanks!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

**From:** Nutton, Byron [mailto:Byron.Nutton@dfo-mpo.gc.ca]  
**Sent:** Monday, January 07, 2019 11:28 AM  
**To:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** meeting minutes

Hi Charlotte and Jemma,

I can't seem to find any record of our last meeting with TWN – were there minutes circulated after that meeting, and if so can you please forward them again.

Thanks,

*Byron Nutton, RPBio*

**A/Team Lead | Chef d'équipe Intérimaire**  
**Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices**  
**Fisheries Protection Program | Programme de protection des pêches**  
**Fisheries and Oceans Canada | Pêches et Océans Canada**  
**Pacific Region | Région du Pacifique**

250-618-4268

## Thorpe, Suzanne

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**From:** Nutton, Byron  
**Sent:** Monday, January 7, 2019 2:39 PM  
**To:** Thorpe, Suzanne  
**Subject:** RE: VFPA's Summary of Indigenous Engagement Report on Habitat Bank Arrangement: DFO re-categorization

Thanks Suzanne. Please go ahead and forward to VFPA directly with cc to me.

**From:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Sent:** 2019-January-07 2:34 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** VFPA's Summary of Indigenous Engagement Report on Habitat Bank Arrangement: DFO re-categorization

Hi Byron;

The following is the final DFO-drafted attempt at a broad re-arrangement of the section on "concerns/ issues/ input received" into modified categories, while retaining the information presented by VFPA. As you suggested, and I agree, this may provide a better framework for summarizing and then preparing response on the concerns and issues.

I cleaned this up (from Friday's version) to ensure that the wording was only slightly modified from original and that abbreviations were removed, etc.

Do you want to send to VFPA after another look or shall I?

### 1. VFPA-DFO Habitat Banking Arrangement:

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation
- Importance of ensuring that constructed project sites are protected into the future
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required [could leave here or place into 3<sup>rd</sup> category].

### 2. Habitat Banking (specifically):

- Concern that because First Nations were not consulted with banking happened in the 1990s that they voices will not be heard on future banking projects
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact

### 3. Engagement Processes:

- General support that the HEPs consultation is understood and has been effective
- General support for projects built to date and consultation process undertaken by VFPA
- FN desire for involvement in all aspects and phases of HEP projects: provision of input to project ID, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation
- Monitoring including FN values (food quality for consumption), use of Western science and TEK, potential use of DNA analysis to determine stock use

- Sharing of information: collection data, monitoring data. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.)
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

#### **4. Aboriginal consultation and Regulatory processes:**

- General consultation concerns: adequacy of consultation at all levels of FN governance (for all aspects of habitat banking, including the policy itself)
- Concerns that DFO consultation is completed on project by project basis – one project at a time when Authorization is sought Importance of FN being informed of projects that do not get an Authorization due to impacts
- Concern that Crown is swayed to grant Authorizations if habitat is already banked
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights
- Guiding principles for offsetting should include that offsetting be done to also support FN cultural values
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries
- General perspective that habitat is not “created” but only restored, something is displaced to create new habitat
- There is perception DFO approves all authorizations
- Need for using Traditional Knowledge in the monitoring and evaluation of projects
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm

#### **5. General scientific, technical and cultural:**

- Request for projects to be built on South Arm Fraser R./ Vancouver Island
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dying system design with benefits to fish)
- Consideration of climate change, sea level rise and flood management in project planning
- General interest in shellfish restoration & other food-harvest value species
- Cultural considerations are important: intertwine legacy and cultural history into projects
- Cultural loss of marine aquatic species (clam beds)
- Development of educational resources, including FN specific educational aspects and opportunities (important species, cultural history)
- Need for balance: infrastructure development and healthy environment

#### **6. General state of the environment:**

- Compensation for historic impacts/ damage/ destruction of environment – lack of industry accountability for historic damages/ destruction of habitat
- Need for balance of infrastructure development and environment
- Impacts of dyking on Fraser River
- Impacts of fish farms
- Importance needs to be placed on protecting native species
- Access to and health of marine aquatic species (clam beds) for FN

#### **7. Other:**

- *Fisheries Act* Review comments not adequately addressed
- Importance of long-term foreshore management planning and VFPA to support this work and other initiatives
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive

## **Suzanne Thorpe**

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
Government of Canada/ Gouvernement du Canada  
200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512

## **Suzanne Thorpe**

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
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200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512

**No information has been removed or severed from this page**

**From:** Thorpe, Suzanne  
**To:** Nutton, Byron  
**Subject:** Tmo - Bilat  
**Date:** 2019-January-08 3:25:31 PM

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FYI – I am working on a draft response(s) for Section 7 of the VFPA Arrangement – should have something for discussion ready in the am. I'm also looking at the science stuff but don't have anything formalized in writing yet - we should discuss acoustics path forward again and I will write up a modified RSIA tmo pm.

We are 'on' for our bilat – yes?

**Suzanne Thorpe**

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices

Fisheries Protection Program/ Programme de protection des pêches

Ecosystem Management Branch / Direction de la gestion des écosystèmes

Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique.

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200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4

Telephone: (604) 666.3512

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Tuesday, January 8, 2019 7:41 AM  
**To:** Thorpe, Suzanne  
**Cc:** Nutton, Byron; Ruffo, Gord; Scoble, Jemma  
**Subject:** RE: VFPA's Summary of Indigenous Engagement Report on Habitat Bank Arrangement: DFO re-categorization

Good morning Suzanne and Byron,

Thank you for providing below, it is very helpful. VFPA has reviewed and we are fine with your proposed Section 6 theme re-organization below; Jemma will work to incorporate these revisions into Section 6 of the report.

Please submit your Section 7 content as you note below (by Jan 18), and we'd be happy to organize the 'DFO response' content into the final draft of Section 7.

Regards,  
Charlotte

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**From:** Thorpe, Suzanne [mailto:Suzanne.Thorpe@dfo-mpo.gc.ca]  
**Sent:** January-07-19 3:22 PM  
**To:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>; Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** VFPA's Summary of Indigenous Engagement Report on Habitat Bank Arrangement: DFO re-categorization

Hi Charlotte;

Once again thank you for the opportunity to comment on the draft report entitled "*Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement*", prepared by VFPA and submitted to DFO on December 19<sup>th</sup>, 2018.

As discussed with VFPA last Friday, DFO is generally very pleased with the report summary and we provide the following comments for your consideration.

In Section 6: "Concerns/ Issues/ Input Received", DFO proposes that the information might be better presented under topic categories, which could then provide a framework for briefing by topic and preparing responses on the concerns and issues raised. For your consideration and input, DFO has re-arranged Section 6, per below.

In response to the comments made by Indigenous groups, DFO will provide information for Section 7: "Next Steps" shortly (target completion date of January 18<sup>th</sup>, 2019). We thought it best to first concur on the format of the summary comments in Section 6 so that the VFPA and DFO responses can be aligned, and can relate directly back to what was raised by Indigenous groups. Please let us know if you agree this format is acceptable and respond with any further changes in content/ context.

#### 1. VFPA-DFO Habitat Banking Arrangement:

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation
- Importance of ensuring that constructed project sites are protected into the future

- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required [could leave here or place into 3<sup>rd</sup> category].

## **2. Habitat Banking (specifically):**

- Concern that because First Nations were not consulted with banking happened in the 1990s that they voices will not be heard on future banking projects
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact

## **3. Engagement Processes:**

- General support that the HEPs consultation is understood and has been effective
- General support for projects built to date and consultation process undertaken by VFPA
- FN desire for involvement in all aspects and phases of HEP projects: provision of input to project ID, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation
- Monitoring including FN values (food quality for consumption), use of Western science and TEK, potential use of DNA analysis to determine stock use
- Sharing of information: collection data, monitoring data. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.)
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

## **4. Aboriginal consultation and Regulatory processes:**

- General consultation concerns: adequacy of consultation at all levels of FN governance (for all aspects of habitat banking, including the policy itself)
- Concerns that DFO consultation is completed on project by project basis – one project at a time when Authorization is sought Importance of FN being informed of projects that do not get an Authorization due to impacts
- Concern that Crown is swayed to grant Authorizations if habitat is already banked
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights
- Guiding principles for offsetting should include that offsetting be done to also support FN cultural values
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries
- General perspective that habitat is not “created” but only restored, something is displaced to create new habitat
- There is perception DFO approves all authorizations
- Need for using Traditional Knowledge in the monitoring and evaluation of projects
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm

## **5. General scientific, technical and cultural:**

- Request for projects to be built on South Arm Fraser R./ Vancouver Island
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dying system design with benefits to fish)
- Consideration of climate change, sea level rise and flood management in project planning
- General interest in shellfish restoration & other food-harvest value species
- Cultural considerations are important: intertwine legacy and cultural history into projects
- Cultural loss of marine aquatic species (clam beds)
- Development of educational resources, including FN specific educational aspects and opportunities (important species, cultural history)

- Need for balance: infrastructure development and healthy environment

**6. General state of the environment:**

- Compensation for historic impacts/ damage/ destruction of environment – lack of industry accountability for historic damages/ destruction of habitat
- Need for balance of infrastructure development and environment
- Impacts of dyking on Fraser River
- Impacts of fish farms
- Importance needs to be placed on protecting native species
- Access to and health of marine aquatic species (clam beds) for FN

**7. Other:**

- *Fisheries Act* Review comments not adequately addressed
- Importance of long-term foreshore management planning and VFPA to support this work and other initiatives
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive

Thanks for arranging the discussion last Friday.

Please contact me directly to discuss the Summary Report.

Talk soon,

**Suzanne Thorpe**

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices

Fisheries Protection Program/ Programme de protection des pêches

Ecosystem Management Branch / Direction de la gestion des écosystèmes

Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique

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Telephone: (604) 666.3512

## **Thorpe, Suzanne**

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**From:** Thorpe, Suzanne  
**Sent:** Wednesday, January 9, 2019 10:06 AM  
**To:** Nutton, Byron  
**Subject:** FW: This is obviously draft so let's discuss once you've had a look  
**Attachments:** 2019-01-08\_VFPA\_HBA-SummaryRpt\_Categorized-DFO-Responses.docx

**From:** Thorpe, Suzanne  
**Sent:** 2019-January-09 9:37 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** This is obviously draft so let's discuss once you've had a look

### **Suzanne Thorpe**

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
Government of Canada/ Gouvernement du Canada  
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Telephone: (604) 666.3512

#### 1. VFPA-DFO Habitat Banking Arrangement:

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation
- Importance of ensuring that constructed project sites are protected into the future
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required [could leave here or place into 3<sup>rd</sup> category].

#### Proposed DFO response (draft):

In response to the concern brought forward regarding the term "conservation project" when referring to habitat banking projects, DFO and VFPA have modified the language of the Port of Vancouver Habitat Bank Arrangement such that the conservation projects identified in the updated Arrangement between VFPA and DFO will be referred to as "habitat banking projects". It should be noted that, if approved, the new *Fisheries Act* (under Bill C-68) will use the terminology "conservation project" meaning "a work, undertaking or activity that is carried on by a proponent for the purpose of creating, restoring or enhancing fish habitat within a service area in order to acquire habitat credits". Regionally, DFO could modify the language used in the regionally-signed Arrangements respecting Fish Habitat Banks by referring to such regional projects as "habitat banking projects". Regional staff have elevated the concern identified by Indigenous groups in the Pacific Region to National Headquarters staff.

In the development of any habitat bank, it is intended that all projects will be fully functional and protected as fish habitat over the long-term.

Early engagement on regional Habitat Banking Arrangements will be undertaken by proponents as part of the process of establishing a new or updated regional Habitat Banking Arrangement, as well as in regard to any new proposed habitat banking projects. DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposed to use banked habitat credits as part of a Request for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet their offsetting requirements.

Through consultation DFO will endeavour to understand potential adverse impacts on asserted or established Aboriginal or treaty right land, where appropriate, identify way to minimize those adverse impacts through avoidance, mitigation, or offsetting measures incorporated as conditions of the Authorization, where appropriate.

#### 2. Habitat Banking (specifically):

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact

#### Proposed DFO response (draft):

#### Commented [TS1]: s. 40 of Bill C-68

HB will become Crown conduct under the new Act and will REQUIRE consultation. Currently in policy. Policy written that it is not actual CC or that it is required but it is good governance.

#### SUMMARY

This enactment amends the *Fisheries Act* to, among other things,

- (a) require that, when making a decision under that Act, the Minister shall consider any adverse effects that the decision may have on the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the *Constitution Act, 1982*, include provisions respecting the consideration and protection of Indigenous knowledge of the Indigenous peoples of Canada, and authorize the making of agreements with Indigenous governing bodies to further the purpose of the *Fisheries Act*;
- (b) add a purpose clause and considerations for decision-making under that Act;
- (c) empower the Minister to establish advisory panels and to set fees, including for the provision of regulatory processes;
- (d) provide measures for the protection of fish and fish habitat with respect to works, undertakings or activities that may result in the death of fish or the harmful alteration, disruption or destruction of fish habitat, including in ecologically significant areas, as well as measures relating to the modernization of the regulatory framework such as authorization of projects, establishment of standards and codes of practice, creation of fish habitat banks by a proponent of a project and establishment of a public registry;

Aboriginal and Treaty rights will also be considered in the planning and establishment of a proponent-led habitat bank and, in particular, planning habitat banking projects and defining the service area\* to ensure there are no resulting adverse impacts on Aboriginal or Treaty rights.

\* service area – a geographical area or boundary that encompasses the habitat banking projects that can reasonably be expected to provide appropriate offsetting. It must be based on the consideration of ecological criteria and fisheries management objectives, including the survival and recovery of aquatic species at risk and, if applicable, jurisdictional boundaries.

### 3. Engagement Processes:

- General support that the HEPs consultation is understood and has been effective
- General support for projects built to date and consultation process undertaken by VFPA
- FN desire for involvement in all aspects and phases of HEP projects: provision of input to project ID, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation
- Monitoring including FN values (food quality for consumption), use of Western science and TEK, potential use of DNA analysis to determine stock use
- Sharing of information: collection data, monitoring data. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.)
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

### Proposed DFO response (draft):

DFO will engage with Indigenous groups to share information and seek views on any new Habitat Banking Arrangements, as well as to seek feedback and engage in processes that provide opportunities for involvement in habitat banking projects.

### 4. Aboriginal consultation and Regulatory processes:

- General consultation concerns: adequacy of consultation at all levels of FN governance (for all aspects of habitat banking, including the policy itself)
- Concerns that DFO consultation is completed on project by project basis – one project at a time when Authorization is sought Importance of FN being informed of projects that do not get an Authorization due to impacts
- Concern that Crown is swayed to grant Authorizations if habitat is already banked
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- Guiding principles for offsetting should include that offsetting be done to also support FN cultural values
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- There is perception DFO approves all authorizations
- Need for using Traditional Knowledge in the monitoring and evaluation of projects
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm

**Proposed DFO response (draft):**

As outlined in DFOs "Interim .." does not guarantee ...

Regional staff have elevated the concern from Indigenous groups regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in the planning, development, construction and monitoring and evaluation of projects. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. We look forward to continued discussion on how to incorporate these concerns into policy and projects.

**5. General scientific, technical and cultural:**

- Request for projects to be built on South Arm Fraser R./ Vancouver Island
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish)
- Consideration of climate change, sea level rise and flood management in project planning
- General interest in shellfish restoration & other food-harvest value species
- Cultural considerations are important: intertwine legacy and cultural history into projects
- Cultural loss of marine aquatic species (clam beds)
- Development of educational resources, including FN specific educational aspects and opportunities (important species, cultural history)
- Need for balance: infrastructure development and healthy environment

regional staff have elevated the concern from Indigenous groups regarding the language used in the national policy to National Headquarters staff

**Proposed DFO response (draft):**

As outlined in

**6. General state of the environment:**

- Compensation for historic impacts/ damage/ destruction of environment – lack of industry accountability for historic damages/ destruction of habitat
- Need for balance of infrastructure development and environment
- Impacts of dyking on Fraser River
- Impacts of fish farms
- Importance needs to be placed on protecting native species
- Access to and health of marine aquatic species (clam beds) for FN

**Proposed DFO response (draft):**

As outlined in

**7. Other:**

- *Fisheries Act* Review comments not adequately addressed

- Importance of long-term foreshore management planning and VFPA to support this work and other initiatives
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive

**Proposed DFO response (draft):**

As outlined in

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**Hwang, Jason**

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**Subject:** meet with VFPA [REDACTED] and Gord Ruffo

**Start:** Wed 09/01/2019 3:00 PM

**End:** Wed 09/01/2019 4:30 PM

**Recurrence:** (none)

**Organizer:** Hwang, Jason s.19(1)

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## Hwang, Jason

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**From:** Nutton, Byron  
**Sent:** January-09-19 8:34 AM  
**To:** Hwang, Jason  
**Subject:** RE: VFPA Habitat Bank  
**Attachments:** 2018-08-14 VFPA proposed changes to Habitat Bank Arrangement.docx;  
Interim\_Guide\_to\_Proponent-led\_Hatitat\_Banking.pdf

See attached August version.

Also, a copy of the interim guidance in case you don't have it – it's not easy to find on the website.

The only reference to third party the use of credits (although semantic, being very careful to not use the words "sale" or "selling") now appears at the end of Annex A on page 21, and reads:

Third Parties:

VFPA may develop conservation projects for inclusion in the Habitat Bank in collaboration with third parties. Once included in the Habitat Bank, such conservation projects will be treated in the same manner as other conservation projects that have been placed into the Habitat Bank.

VFPA may enter into agreements with third parties to allow withdrawal of habitat credits, as defined by this Arrangement, when such an agreement facilitates development activities that support VFPA in fulfilling its mandate.

It took a long time and many rounds of conversation/revision to get to this point, including my insistence that any third party use of credits be tied to development activities that support VFPAs mandate. This is what we provided back in March and VFPA has indicated they are good with it.

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**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** 2019-January-08 9:51 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA Habitat Bank

This is excellent and very helpful. Thanks. Can you send me the most current version of the agreement. I recognize it may not be final, but I would like to read what we are saying about selling credits. I would like to discuss this particular aspect with you further with you during our bi-lat on Friday.

---

**From:** Nutton, Byron  
**Sent:** January-08-19 10:20 AM  
**To:** Hwang, Jason  
**Subject:** VFPA Habitat Bank

Hey Jason,

First, a quick update on where we are at with negotiation of a new VFPA habitat bank arrangement:

1. Current agreement expired in 2017 and was extended by letter from Cheryl for one year, then again to March 31, 2019.

2. VFPA are not interested in any additional extension and are very focussed on having a new arrangement executed before the end of March.
3. Most recent draft of a new arrangement was provided by VFPA in August 2018 and had only minor edits/amendments to the previous draft provided by DFO in March 2018.
4. Since August, DFO and VFPA have been working on implementing an Indigenous engagement plan which is now complete and we are finalizing a summary report.
5. We are still reviewing the feedback from the engagement sessions, and require additional follow-up with Tsleil-Waututh Nation, but at this point it seems that only a few editorial changes to the arrangement might be required.
6. DFO needs to consider editorial changes resulting from FPP re-organization (i.e. currently Team Lead, PSG identified as key contact, and most importantly currently RD sign-off – should/could this now be Brad instead?)

Suzanne and I are working on this right now and will have something for you to dig your teeth into later this week.

With respect to what it sounds like your meeting will focus on, please note that in line with the interim guidance, I have tried to maintain a focus on physical/footprint-type projects that have defined areas and measurable benefits. Some of the concepts they have brought forward, such as depositing sand off sturgeon bank in the hope of slowing rates of erosion, might be great ideas but don't necessarily fit well with the current habitat banking guidance. I'm supportive of talking about bigger/broader things with VFPA in the future but I'd caution how far you want to go with respect to direct links to habitat banking. Also, please note that VFPA decided to call it their Habitat Enhancement Program. I have pointed out in the past that the name is a bit confusing especially when dealing with Indigenous groups (Habitat Banking Program would be a bit less ambiguous with respect to the idea that these projects will be used as future offsetting) but they have countered with the idea that their program is set up to contemplate more than just banking projects and so perhaps that opens the door to parsing out strict banking vs. doing the right thing...

Sensitive issues that might come up in order of how sensitive they might be:

1. Execution of a new arrangement before the end of March: See update above.
2. Sale of habitat credits: The existing agreement allows for the sale of credits – this is not in line with the current interim guidance. It has been discussed at length and input from the DG has not ruled it out but rather suggested that we will have to find a way to deal with it. Suzanne and I spent considerable time discussing this aspect and I am comfortable with the "middle ground" we proposed in the March version which allows VFPA to use credits to offset impacts for third-party developments.
3. Valuation of habitat credits and existing habitat: VFPA has floated several options around the valuation of credits with respect to existing habitat values that we have refuted (mostly back when Holly was leading, but started even before that when I was previous leading as the marine BI-3). Since I took the file back from Holly we have parked that discussion and are working with a system of having pre-existing conditions well documented so that they can be considered at the time the credits are used as offsetting. This issue has somewhat subsided as it has not been relevant to recently constructed projects (reclaiming previously filled areas that did not support any fish habitat value back to aquatic habitat) but will come back once the arrangement is finalized and our focus returns to projects where it is relevant (i.e. the Maplewood flats and Steveston jetty projects we discussed yesterday).

Cheers,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

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**Pages 1423 to / à 1461  
are duplicates of  
sont des duplicatas des  
pages 1153 to / à 1191**

**Pages 1462 to / à 1504**  
**are duplicates**  
**sont des duplicatas**

## Thorpe, Suzanne

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**From:** Nutton, Byron  
**Sent:** Wednesday, January 9, 2019 1:47 PM  
**To:** Thorpe, Suzanne  
**Subject:** FW: VFPA Habitat Bank

---

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** 2019-January-08 9:51 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA Habitat Bank

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Cheers,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

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Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

250-618-4268



## Thorpe, Suzanne

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**From:** Thorpe, Suzanne  
**Sent:** Thursday, January 10, 2019 1:07 PM  
**To:** 'Olson, Charlotte'; Nutton, Byron  
**Cc:** Ruffo, Gord; Scoble, Jemma  
**Subject:** RE: Draft revised summary Record of Discussions from Indigenous engagement meetings - DFO response Jan 10  
**Attachments:** 2018-10-16-VFPA-DFO\_Engagement-with-AGs\_BrentwoodBay-DFO\_revised\_SUMMARY-CO+ST\_Edit-Rev1.docx; 2018-09-11-VFPA-DFO\_Engagement-with-AGs\_Vancouver-DFO\_revised\_SUMMARY-CO+ST\_Edit-Rev1.docx; 2018-11-29-VFPA-DFO\_Engagement-with-AGs\_Chilliwack-DFO\_revised\_SUMMARY-CO+ST\_Edit-Rev1.docx

Hi Charlotte;

Thanks for the review of these and the edits, etc. In reading through again, I made a couple of additional really minor edits – highlighted in yellow text. It looks like Jemma may do a few more edits as well to finalize.

DFO has no further concerns; therefore, please distribute accordingly.

Thanks and talk soon,

Suzanne  
P: 604.666.3512

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** 2019-January-10 8:52 AM  
**To:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** RE: Draft revised summary Record of Discussions from Indigenous engagement meetings - VFPA Edits Jan 10

Good morning Byron and Suzanne

We have reviewed your 3 revised summary notes, thanks very much for the efforts there Suzanne.

**VFPA has made some minor editorial edits (as requested – attached here) and wishes to distribute the attached 3 sets (clean, no mark-up) to AGs by EOD this Friday.**

This will allow AGs to review the final draft meeting summaries (over the next 2 weeks), and provide any last comments in advance of VFPA finalizing the summary report at the end of January, per our plan.

**Unless you respond with any concerns, we will be proceeding to send out these 3 sets after Friday.**

Thanks again, and we look forward to your content next week (by Jan 18 at latest) related to how DFO will be responding to items that you are responsible for (for the report).

Regards,  
Charlotte

PS, Also – please note that I did sent out our bi-monthly call invite via Outlook, first call is on Thursday Jan 24 (10-11am), please accept the invite series as we discussed.

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
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**Pages 1522 to / à 1529  
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sont des duplicatas des  
pages 1547 to / à 1554**

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Thursday, January 10, 2019 1:23 PM  
**To:** Thorpe, Suzanne; Nutton, Byron  
**Cc:** Ruffo, Gord; Scoble, Jemma  
**Subject:** RE: Draft revised summary Record of Discussions from Indigenous engagement meetings - DFO response Jan 10

Great, thanks Suzanne – we are also fine with your final draft Rev1's that you just sent back.  
We'll make sure it's those versions that go out to AGs at the end of this week.  
Thanks again, Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

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**From:** Thorpe, Suzanne [mailto:Suzanne.Thorpe@dfo-mpo.gc.ca]  
**Sent:** Thursday, January 10, 2019 1:07 PM  
**To:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>; Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** RE: Draft revised summary Record of Discussions from Indigenous engagement meetings - DFO response Jan 10

Hi Charlotte;

Thanks for the review of these and the edits, etc. In reading through again, I made a couple of additional really minor edits – highlighted in yellow text. It looks like Jemma may do a few more edits as well to finalize.

DFO has no further concerns; therefore, please distribute accordingly.

Thanks and talk soon,

Suzanne  
P: 604.666.3512

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**From:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Sent:** 2019-January-10 8:52 AM  
**To:** Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>; Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Cc:** Ruffo, Gord <[Gord.Ruffo@portvancouver.com](mailto:Gord.Ruffo@portvancouver.com)>; Scoble, Jemma <[Jemma.Scoble@portvancouver.com](mailto:Jemma.Scoble@portvancouver.com)>  
**Subject:** RE: Draft revised summary Record of Discussions from Indigenous engagement meetings - VFPA Edits Jan 10

Good morning Byron and Suzanne

We have reviewed your 3 revised summary notes, thanks very much for the efforts there Suzanne.

**VFPA has made some minor editorial edits (as requested – attached here) and wishes to distribute the attached 3 sets (clean, no mark-up) to AGs by EOD this Friday.**

This will allow AGs to review the final draft meeting summaries (over the next 2 weeks), and provide any last comments in advance of VFPA finalizing the summary report at the end of January, per our plan.

**Unless you respond with any concerns, we will be proceeding to send out these 3 sets after Friday.**

Thanks again, and we look forward to your content next week (by Jan 18 at latest) related to how DFO will be responding to items that you are responsible for (for the report).

Regards,  
Charlotte

PS, Also – please note that I did sent out our bi-monthly call invite via Outlook, first call is on Thursday Jan 24 (10-11am), please accept the invite series as we discussed.

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
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## Thorpe, Suzanne

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**From:** Thorpe, Suzanne  
**Sent:** Thursday, January 10, 2019 12:51 PM  
**To:** Nutton, Byron  
**Subject:** RE: Draft revised summary Record of Discussions from Indigenous engagement meetings - VFPA Edits Jan 10  
**Attachments:** 2018-10-16-VFPA-DFO\_Engagement-with-AGs\_BrentwoodBay-DFO\_revised\_SUMMARY-CO+ST\_Edit-Rev1.docx; 2018-09-11-VFPA-DFO\_Engagement-with-AGs\_Vancouver-DFO\_revised\_SUMMARY-CO+ST\_Edit-Rev1.docx; 2018-11-29-VFPA-DFO\_Engagement-with-AGs\_Chilliwack-DFO\_revised\_SUMMARY-CO+ST\_Edit-Rev1.docx

Byron;

If the minutes were to have gone out as is, they would be fine; however, in my re-read of the revised notes I did make some very minor corrections that I have highlighted in yellow – I was unable to turn on the 'track changes'.

There are 3 revised versions attached. We can respond to VFPA that we concur and they can send out ... it looks like Jemma still has to do a check-over anyway and my edits can easily be incorporated.

Please do have a quick look at the wording on p 3 of 5 for Tuesday, September 11, 2018. I think the change in context is still ok re: "up until habitat credits are *proposed to be* withdrawn" – any concern with that change?

Talk later,

Suzanne

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** 2019-January-10 9:41 AM  
**To:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** FW: Draft revised summary Record of Discussions from Indigenous engagement meetings - VFPA Edits Jan 10  
**Importance:** High

Hey Suzanne,

Are you able to slide reviewing these up to the top of your list of things for today? Let me know if you have any concerns you want to discuss, but otherwise if you are OK with them or have any straight-forward editorial suggestions then please advise VFPA directly.

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** 2019-January-10 8:52 AM  
**To:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** RE: Draft revised summary Record of Discussions from Indigenous engagement meetings - VFPA Edits Jan 10

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Regards,  
Charlotte

PS, Also – please note that I did sent out our bi-monthly call invite via Outlook, first call is on Thursday Jan 24 (10-11am), please accept the invite series as we discussed.

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
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P: 604.665.9590 | CELL: 604.349.4111  
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VANCOUVER FRASER PORT AUTHORITY  
MEETING NOTES

**VFPA-HEP & DFO Consultation with Aboriginal Groups on:**

- VFPA-HEP's Consultation Process for Habitat Banking Projects (VFPA)
- Overview of Proponent-led Habitat Banking (DFO)

**Date:** Tuesday, October 16, 2018

**Time:** 9:00 a.m. to 1:30 p.m.

**Location:** Brentwood Bay Resort, Brentwood Bay

**Participants:**



Jemma Scoble, VFPA  
Sinead Deery VFPA  
Charlotte Olson, VFPA  
Gord Ruffo, VFPA

Hemmera

Byron Nutton, DFO  
Suzanne Thorpe, DFO  
Shona Smith, DFO

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Commented [A1]: Jemma to edit to indicate which Nation each attendee is from for consistency with other meeting notes.

**Agenda:**

- | #  | Item   |
|----|--|
| 1. | Introductions  |
| 2. | VFPA Presentation <ul style="list-style-type: none"><li>• Objectives of Information Session</li><li>• Overview of VFPA's Habitat Enhancement Program</li><li>• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li><li>• Project example: New Brighton Park Shoreline Habitat Restoration Project</li></ul> |
| 3. | DFO Presentation <ul style="list-style-type: none"><li>• Requirements for Fisheries Act Authorizations</li><li>• Proponent-led habitat banking</li><li>• Habitat banking arrangements</li></ul>  |
| 4. | Questions and General Discussion   |

**Documents Provided:**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. Overview of Proponent-led Habitat Banking (DFO presentation)
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

### Summary of Discussions:

An overview of the Habitat Enhancement Program was provided by VFPA. VFPA has had a banking agreement with DFO for the last 5 years and the purpose of the meeting is its renewal.

<VFPA presentation>

A question was asked regarding the word "balance" and what that means to VFPA; whether the port intends to incorporate previous development into finding balance? Clarity was also sought about measuring such balance between infrastructure today and providing a healthy environment, specifically referring to measuring thresholds and confirming "balance". VFPA responded that they generally focused on improving areas that were previously affected (e.g., log debris from booms) and that they consider past/future development and opportunities to restore previously affected areas in order to try to balance impacts from development.

A question was asked about the types of partnerships that VFPA forms with organizations, aside from the habitat banking partnership with DFO. VFPA responded that they have many partnerships and they actively look for opportunities to partner with others. As an example, VFPA partnered to work with Pacific Salmon Foundation (PSF) by providing funding related to research on eulachon on the Fraser.

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Comments were made regarding municipal projects, and the level of authority that VFPA and DFO have over such projects when First Nations have concerns about them. VFPA indicated that they try to align with municipalities, when possible but that there are often other factors and priorities that are taken into consideration. DFO advised that they don't have authority over municipalities per se, but that when there is opportunity for habitat restoration, that there is effort to try to link and resolve interests between parties.

Concerns were raised regarding local government allowing effects on habitat due to development, and a desire for DFO to address it. DFO responded that with the new changes to the *Fisheries Act*, there would be opportunity to be (re)involved in integrated planning processes, rather than just considering serious harm to fish, which is a reactive and legislative approach. DFO encouraged engagement on the *Fisheries Act* review.

Additional note: many municipalities have their own environmental departments and by-laws and regulations to support environmental protection within their land boundaries. DFO reviews municipal projects that are likely to result in serious harm to fish or fish habitat but these only account for a small percentage of projects that are undertaken. The province of BC also has regulations that may pertain to municipal projects.

Advice was given to VFPA and DFO that project monitoring (data and results) is of interest to First Nations, as well as determining what obstacles are needed to be overcome to enable a restoration project (e.g., dealing with geese issues predation at Glenrose). It was also indicated that project monitoring needs to be reported with context of the long term benefits and indicator targets (e.g., reports of fish). VFPA agreed and indicated that post construction updates and reporting is important and advised that this information is shared with interested First Nations. VFPA advised they will continue to improve on the reporting and sharing information.

Concerns were raised regarding monitoring undertaken on restoration projects. There is a need to understand what monitoring is being undertaken and for what purposes.

There was broad discussion about the quantitative analysis and qualitative analysis undertaken to support VFPA's restoration projects. VFPA indicated that monitoring results

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

reports are prepared each year and that measures are taken to accelerate the recovery of habitat and prevent any impacts to restored habitats. To date, VFPA's monitoring has largely been based on standard methodologies and generally, plant-based indicators (e.g. percent vegetation coverage). VFPA advised that there is opportunity to modify the program in place and consider other targets and factors as the program develops. DFO indicated that the habitat program is proponent-led so the indicators and measures are generally proposed by the proponents for acceptance by DFO, and that proponents are responsible to show restoration success prior to the project being accepted for use in a habitat bank as credit. A specific comment was made by regarding the importance of the density of eelgrass and its role as an ecosystem health indicator. It was suggested that the indicators should be based on a healthy ecosystem approach, rather than comparison to a reference site that may not be functioning to maximum capacity as a healthy ecosystem/ good indicator.

Concerns were raised regarding project placement (location) and the surrounding conditions (e.g., water quality issues). There was discussion about the choice and establishment of projects, and ensuring projects are located where there is a strong likelihood of success and/or in addressing habitat that is lacking in certain areas, or other limiting factors. As well, VFPA and other agencies consider project benchmarks. This relies on research regarding investigation and studies to inform project feasibility as well as other studies. VFPA advised that there is a fundamental basis of scientific research needed and a high degree of comfort that the background research is right work and engineering is sound, as it guides what projects are technically feasible.

Concerns were raised about shellfish closures, contamination and the use of water for cultural reasons, as well as concerns about levels of bacteria and its resulting effects on people. Dredging and industrial development concerns were also raised.

The importance of indicator species (crab, sea urchin) to First Nations was brought forward, as well as the need to ensure sustainable food-based ecosystems to support First Nations food fisheries and rights to harvest. The water being "alive" is an important concept.

Concerns were also raised regarding industries that cause impacts and those industries not having a role to restore/ rehabilitate the areas used. VFPA acknowledged this, but also indicated that they can only address areas within which the port has administration. VFPA discussed the positive merits of working in partnership for restoration projects and advised about how they are trying to set positive examples of successful projects with municipal and public support that other industries can consider in their restoration efforts (e.g., New Brighton Park). VFPA discussed the projects developed on port land and advised that studies are completed to ensure that impacts are avoided as best as possible. VFPA noted that the new projects do not address past effects, per se, but moving forward through the Habitat Enhancement Program they are ensuring that any new impacts are fully mitigated and/ or offset. DFO advised that with regard to past impacts, that the federal government has salmon enhancement funding opportunities available and that the new proposed legislation and upcoming funding opportunities may result in an increased mandate for undertaking additional restorative work (by DFO, or facilitated by DFO-DFO).

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A concern was raised about a project severely impacting Tsartlip's estuary, where eelgrass and fish passage across a dam were/are purportedly affected by stream restoration works. First Nations expressed that those proponents with funding should have some level of responsibility for these types of projects.

VFPA indicated that their main source of funding is from capital infrastructure at the port and that they are building habitat in advance of port development.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

There was discussion on the willingness and capability of VFPA to complete offsets/ habitat banking outside of the Lower Mainland and VFPA indicated that they would be open to consideration of projects within their service area, and on Vancouver Island. First Nations would like to have some projects considered near the Nanaimo River estuary and in the Fraser River (specific to the South Arm). Further engagement will be needed to flesh out potential considerations and understand what projects First Nations would recommend. VFPA advised that they are considering opportunity for a large proposed project referred to as the proposed "South Arm Jetty Tidal Marsh Project", which may have potential restoration opportunity over 30-40ha but that as with any project, there are challenges due to land use and other infrastructure limitations.

First Nations requested review of project ideas and recommendations that are not currently listed by VFPA, and broadly indicated support for restoration projects in general. There is a desire by Indigenous groups on Vancouver Island to specifically consider proposals for projects on the Fraser River. Concerns were also raised about log storage/ removal, dyking. VFPA advised that they have discussed dyking issues with some municipalities and are considering if there may be opportunities to protect/ enhance habitat, as well as consider implications due to sea level rise.

First Nations discussed the challenges in bringing forward discussion on First Nations history and way of life. Their history dates far back and their legacy defined through stories about how people would travel up the Fraser and camp; and this includes stories of how fish were bought from First Nations right off their boats, and of women roasting ducks harvested from local marshland areas. First Nations wants people to know that sea asparagus is edible and that it provides habitat. The interconnectedness of species and habitat is important and has purpose; there are food web linkages, for example, from barnacles to other animals. A high importance is placed on teaching and legacy. There is a desire for certain kinds of "legacy projects", to teach others and leave a legacy for young people via engagement in these projects – through pictures and through understanding their culture and history.

<Break>

VFPA discussed the involvement of First Nations in projects and the consultation process undertaken to identify priorities (e.g., for New Brighton: ecological signage including traditional knowledge for education, cultural recognition).

VFPA also discussed the need for maintenance and monitoring when habitat is built.

There was an inquiry about accounting for climate change and VFPA advised that it is addressed in the design phase, especially since most of their habitat restoration is located in areas having coastal/tidal influence. A follow up inquiry was asked about the protection of restoration habitat(s) after they are established. VFPA responded that the restoration areas are designated conservation under VFPA's land use plan. There are protections in place overall for fish habitat, per the BC *Fish Protection Act* and the federal *Fisheries Act*.

<DFO presentation> "Overview of Proponent-Led Habitat Banking"

DFO advises that they will be presenting information on the policy that supports the habitat banking policy as per current legislation. DFO noted that the *Fisheries Act* review and possible amendments are in progress through Parliament but that while the language of the Act may change, the general principles of protecting fish habitat are unlikely to change and there is still expected to be habitat banking defined in the Act.

A comment was made that when referring to guiding principles (#1) that they seem to be supportive of commercial fishery. Questions were asked regarding "Where do First Nations priorities fit in here? What are the local restoration priorities?" A recommendation was made that there should be a separate guiding principle to offset in a way that supports First

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Nations cultural values. DFO clarified that the guiding principle (#1) includes First Nations fisheries, and is not meant to preclude any type of fisheries.

A follow up question was asked regarding guiding principle #2 regarding how offsetting measures would "balance" project impacts and what that means. DFO responded by clarifying that the guiding principles are national principles specific to the offsetting guidance and process. If DFO contemplates issuing an Authorization for serious harm to fish, there is counterbalancing/offsetting of that harm. There was some discussion regarding the process of effects assessment, residual impacts and offsetting those residual impacts, noting that site specific assessments are undertaken to try to understand impacts and offset them.

A question was asked about whether or not DFO works with First Nations directly to understand the impacts? DFO confirmed they do work with First Nations to understand impacts and noted there are 2 parts to habitat banking: i) building habitat prior to building projects requiring offsetting and, ii) issuing of an Authorization from DFO for an impact. There is engagement and consultation on all of these aspects.

A question was raised on whether or not New Brighton Park was offsetting a specific development. DFO responded that that New Brighton was not an offset for a specific development but that habitat banking means you are building the offset up front. At some point down the road, there might be a development that causes an impact and VFPA would apply to use the bank if applicable to their project. Habitat banking is not a typical approach where you build habitat to offset a specific project (e.g.i.e., at the same time).

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There was discussion regarding use of the term "*conservation project*" in reference to habitat banking. DFO noted that it is a term used in the policy document to distinguish between a habitat development project and an offsetting project. First Nations noted that there may be concerns with the term because Aboriginal rights can be set aside in favour of conservation; they feel the reference needs to be changed. New Brighton Park shouldn't be considered a conservation project; rather it should be described as a habitat enhancement project. This is important in relation to Aboriginal rights and title interests. There is also strong concern that a proponent may unduly sway the Crown in terms of habitat banking project use. The concern is that proponents have a "bank" they can automatically draw from, with construction down the road. DFO noted the terminology concern and also advised that *Fisheries Act* may change; however, the new Act is likely to be supportive of habitat banking. The information we have is that the proposed Act is likely to take elements of the policy and bring it into the new *Fisheries Act* on a more formal basis as a way to deal with offsetting.

Concerns were raised regarding the overall concept of habitat banking and that it could be used to unduly sway the Crown to grant an Authorization (if habitat is already banked).

A general concern was also raised by First Nations regarding a need for addressing dyking on the South Arm of the Fraser River at a strategic/ innovative level. First Nations are very connected to this land, and its water and resources; as well, it affects several aboriginal fisheries. There is a need for DFO to help to deal with fisheries issues in the area. DFO noted the concern and committed to bring this up to other sectors in the Department. DFO advised that efforts are being made to try to balance benefits of habitat banking (i.e., doing things up front) to make sure that down the road, when it is being used to offset, there is a really clear understanding of the specific benefits of the banking project to balance the impacts of the project. It was further noted that having a habitat bank doesn't guarantee that you will receive an Authorization as the impacts would be evaluated separately from the offsetting.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Concern was raised that DFO doesn't say "no" to projects. Examples of projects where DFO has not granted an Authorization were briefly discussed (e.g., Fish Lake (Taseko)). DFO explained that even if an Authorization isn't denied, proponents often 'cut their losses' earlier in the review process, so a project review doesn't often conclude by 'denying' an Authorization. Such projects are often rescinded by proponents then sometimes resubmitted after having been relocated or revised. Regulatory staff review the projects and apply standard mitigation measures to avoid impacts. There is reliance is on consultants, as qualified professionals, to design a project to avoid/mitigate impacts to fish and fish habitat.

Under the new *Fisheries Act*, there a public registry of projects is proposed.

Concerns were noted concerns regarding Atlantic fish farms.

Additional habitat bank concerns were raised about the projects being discussed being tied to specific locations - that DFO was requesting acceptance of impacts in relation to those projects at this time.

*Additional note:* DFO is not undertaking any projects-specific consultations to exercise any legislative authority under the Act at this time. The intent of this meeting was to discuss the VFPA-DFO arrangement that may enable future habitat projects, and determine how First Nations would like to engage on habitat banking.

DFO clarified that consultation will be completed when the impact is proposed and that consultation for a *Fisheries Act* Authorization is required when DFO contemplates a decision under the Act. This is what the Fisheries Protection Program does. DFO consults on the impacts being proposed and on whether all the avoidance/mitigation measures have been applied, and what should be done to offset impacts. Although there is some uncertainty around offsetting (i.e., is it functioning or not?), the intention of habitat banking is that there is benefit from having certainty of whether the habitat is functioning and productive.

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There was discussion on habitat creation; land-based vs habitat created in the ocean. DFO indicated that habitat creation is somewhat different than restoration. Restoration is the rehabilitation of something which was previously fish habitat that may have been lost, whereas habitat creation is about creating something new. The intention of habitat banking is to create and improve net benefits to fish.

There is a strong desire from First Nations to be brought in early to discuss habitat banking at the forefront when habitat banking is being planned, not just when there is a project requiring consultation. With regard to "habitat" it needs to be recognized that you can't create habitat, you can only change habitat and that you are displacing something to create habitat, whether or not it is land-based and that, too, needs to be accounted for. There were questions regarding when consultation effort was undertaken by DFO in regards to habitat banking. DFO confirmed that the federal legal consultation requirement is as part of a permitting authority.

There was some discussion on what this means. DFO advised that if there is no serious harm to fish that proponents would not need Authorization - prior to building some types of habitat banking projects (i.e., if the project was land-based). For New Brighton Park, VFPA were digging a hole in the park excavated historically placed fill, that had been placed to build an upland park. The park wasn't providing a benefit to fish, now it is. It did not require a *Fisheries Act* Authorization.

Concern was expressed regarding this approach to habitat banking and the need for Authorization for the New Brighton Park project as it is attached to a major water source. From a First Nations perspective, the area is occupied and used and consultation is needed when making those changes.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

There was discussion on consultation. Concerns were expressed that the Nations present aren't being sufficiently consulted. It was expressed that Aboriginal rights and title (under the Douglas Treaty) are perpetual and that the First Nations need to preserve their relationship with the Crown and ensure they do not fetter those rights. Habitat banking should be viewed under a full-spectrum lens to ensure consultation is fulsome and adequate.

DFO noted that while habitat banking in concept isn't new, that the point of meeting now is to advise that the Port has a habitat bank, that the DFO-VFPA habitat bank agreement is being renewed and as well, to understand what the concerns around the VFPA bank are receive input on VFPA's consultation process related to their habitat banking projects. It is not intended this to be consultation on the overall system of habitat banking, although those concerns will be noted.

Participants advised that they haven't been included in previous conversations on habitat banking with DFO and that in light of reconciliation, First Nations communities should be included in all decision making relevant to their lands, waters, resources including those regarding habitat banking. Habitat banking needs to be discussed at the point that projects are being initiated. First Nations expressed their desire to be involved in decision-making and in setting goals together for habitat banking that are acceptable to First Nations. Traditional knowledge should be considered, with the end goal of consumption in mind.

VFPA responded that they will discuss the development of objective measures and the incorporation of First Nations into project planning and project development. They advised that the projects recently completed were improved due to working with First Nations from the beginning. VFPA advised that they want to know how to implement this and work with Nations and determine what that looks like [for each Nation]. The proposed process presented is a starting point, and VFPA is seeking advice on defining and creating the path forward.

VFPA and DFO acknowledged that there may be a need for further discussions on habitat banking projects. These discussions are on the current proposed arrangement between VFPA and DFO, which is a high level arrangement that isn't specific to projects at the ground level. The arrangement itself is about how to manage, build and deliver on habitat banking projects. Processes for seeking input on projects and gaining input are not concluded, and this approach is to gather input from the beginning to inform later stages and determine how Nations wish to be engaged/ consulted.

First Nations consider it a significant issue that they feel they are forced into a pre-approval, pre-consultation environment for habitat banking - not specifically in relation to VFPA but in general. There is a strong desire to understand what all of the projects are, what projects will be proposed or put forward ahead of others and why. The process is as important as the outcome decisions for habitat banking projects and this is very important.

There was discussion on the Douglas Treaty as First Nations advised that the Douglas Treaty has never been recognized by DFO. There is concern that it has not been acknowledged but that DFO wants their consideration for habitat banking. Sentiment was expressed that habitat banking is a way out of infringement and that DFO is justifying infringement on Aboriginal and treaty rights - should call it an "infringement bank". There is a strong desire across all levels of government for meaningful of good engagement.

VFPA and DFO committed to follow up with attendees and provision of summary notes. Consideration will be given to a follow up meeting should attendees wish to have further discussion regarding issues that were brought up, and on the processes and proposed DFO-VFPA habitat banking arrangement.



**VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

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**VANCOUVER FRASER PORT AUTHORITY**

**MEETING NOTES**

## **VFPA-HEP & DFO Consultation with Aboriginal Groups on:**

- VFPA-HEP's Consultation Process for Habitat Banking Projects (VFPA)
- Overview of Proponent-led Habitat Banking (DFO)

**Date: Tuesday, September 11, 2018**

**Time:** 9:00 a.m. to 1:30 p.m.

**Location:** Pacific A & B Rooms, Vancouver Fraser Port Authority, 100 The Pointe 999 Canada Place, Vancouver

## **Participants:**

*Semiahmoo First Nation*

*Semiahmoo First Nation*

*Musqueam First Nation*

*Musqueam First Nation*

*Tsawwassen First Nation*

*Kwikwetlem First Nation*

*Kwikwetlem First Nation*

*Jemma Scoble, VFPA*

*Charlotte Olson, VFPA*

*Gord Ruffo, VFPA*

*Hemmera*

*Byron Nutton, DFO*

*Suzanne Thorpe, DFO*

*Shona Smith, DFO*

## **Agenda:**

- | <b>#</b> | <b><u>Item</u></b>   |
|----------|--|
| 1.       | Introductions  |
| 2.       | VFPA Presentation <ul style="list-style-type: none"><li>• Objectives of Information Session</li><li>• Overview of VFPA's Habitat Enhancement Program</li><li>• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li><li>• Project example: New Brighton Park Shoreline Habitat Restoration Project</li></ul> |
| 3.       | DFO Presentation <ul style="list-style-type: none"><li>• Requirements for Fisheries Act Authorizations</li><li>• Proponent-led habitat banking</li><li>• Habitat banking arrangements</li></ul>  |
| 4.       | Questions and General Discussion   |

## **Documents Provided:**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. Overview of Proponent-led Habitat Banking (DFO presentation)
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

### Summary of Discussion:

VFPA provided context that the purpose of the meeting is to share and discuss, with Aboriginal groups, information related to the consultation processes used for the delivery of VFPA's habitat projects proposed for VFPA's habitat bank and to provide opportunity for Aboriginal group's input into this process. As well, DFO will provide information on their policies related to habitat banking and explain the habitat banking program.

#### <VFPA presentation>

During the VFPA presentation, there was discussion on an example project undertaken with support from First Nations. The Glenrose Tidal Marsh Project was a habitat project that was brought to VFPA from several Nations where ancestral sites were being exposed by erosion and artefacts were being lost/ looted. The opportunity to protect these ancestral sites was of great significance to those Nations. VFPA at looked at providing protections for the ancestral sites – as well as for fish - and prioritized this project because of its significance to the communities.

VFPA indicates that as part of the current engagement effort they are seeking advice on what projects should be considered and how First Nation communities want to work together. The identification of habitat project sites that are significant for the Nations HEP is working with is important. As well, in the project development phase the involvement of Nations in planting and construction opportunities are considered, and VFPA has made such opportunities a priority.

VFPA discussed other projects that VFPA-HEP has undertaken. With Musqueam First Nation (MIB) a project was initially focused on enhancing the foreshore area (on Musqueam lands in Vancouver) with a tidal marsh but feedback from the nation Musqueam brought the focus to the need for a new boat ramp, which was rebuilt on the foreshore by VFPA. Musqueam advised that for this initiative the creation of a tidal marsh was not the main priority, but the boat ramp project was.

A question was asked about whether VFPA had to avoid the City of Vancouver's utilities (e.g., storm drain) in the area where the new wetland was created at New Brighton Park (NBP). VFPA confirmed that the west edge of the wetland had to be located to the east to accommodate the City of Vancouver's storm drain.

A request was made for information on the monitoring results and fish use of the NBP wetland area. VFPA responded that HEP has completed its 2018 annual post construction monitoring a few weeks ago and can share it when the reporting is completed, if there is interest. From a biological perspective, the results are very positive. The salt marsh is establishing well, recognizing it has only been one year and that it takes some time for the sites to establish and function. A Go-pro camera used to obtain underwater video footage at the marsh confirmed that juvenile salmon are now using the tidal channel. As well, some kelp has established in the new habitat.

First Nations asked if there was Aboriginal consultation completed by VFPA for NBP. VFPA responded that there was consultation with Musqueam, Squamish and Tsleil-Waututh First Nations among other Nations. Consultation was conducted to determine the best way to work with the Nations as well as on the technical and design options for the foreshore. Specifically, VFPA advised that Musqueam, Squamish and Tsleil-Waututh First Nations worked with VFPAs technical team on items such as hydraulic flushing, number of channel

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

openings, etc. During the technical discussions the planting plan was reviewed to ensure that the plant selections were supported by the Nations involved.

A question was asked about whether or not the planting plan included any considerations for climate change. VFPA confirmed that climate change was considered and that monitoring is being done to determine the establishment of all species. The plants installed are comprised of native coastal species. Plant selection was based on appropriate native coastal species that are able to survive at different water elevations. This is meant to provide for the long-term survivorship of vegetation in the marsh area. The dune plants, for instance, are hearty and will thrive unless placed underwater. Generally, the plants are becoming well established, specifically pickleweed and arrowgrass.

Questions were asked about monitoring and how long monitoring is performed for. VFPA advised that monitoring is being undertaken on an annual basis up until habitat credits are proposed to be ~~it is~~ withdrawn from the bank or until any further requirements for monitoring by the agencies are concluded.

There was discussion regarding the Vancouver Park Board oversight at NBP. The Park Board has a role for maintaining the adjacent park area but the area of the wetland habitat is under VFPA jurisdiction, and is therefore maintained by VFPA-HEP. A concern was raised regarding the potential for site impacts due to Park Board activities (e.g., release of chlorinated water or other). VFPA advised that they work closely with the Park Board under a formal agreement which should, along with federal and provincial legislation and regulations, prevent impacts to the restored wetlands.

First Nations advised that there is value in the planting of traditional foods for Katzie FN and for many other bands; these represent some of the valued trade goods. As well, there are educational opportunities in such areas that could be taken advantage of.

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### <DFO presentation>

A question was asked regarding what chemical/ biological manipulation is included in the context of offsetting. DFO responded that this could be something like herbicide treatment of invasive species or lake fertilization to promote primary and secondary production of fish that would in turn improve the survival of juvenile fish.

Additional note: To date, DFO has not considered chemical or biological manipulation for any habitat banking project. Its relevance in the context of habitat banking is limited and may not be appropriate for habitat banking credit allocation.

There was discussion regarding habitat banking. DFO provided information on habitat banking including that:

- There are examples of habitat banking from the early nineties so habitat banking precedence is well established.
- Habitat banks are used Canada-wide and they have been used in BC as a practice for many years for offsetting environmental impacts.
- Site surveys and monitoring is completed to ensure performance is met; at the time of withdrawal the site is reviewed in consideration of its applicability to an Authorization and relevant offsetting requirements.
- With regard to the use of ratios used to calculate the scale of offset for certain components of the Aauthorized work, undertaking or activity, the use of ratios

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

depends on what the habitat values are and the type of project impacts for determining ratios. Under Aauthorization where there is no habitat bank available, reasons to use ratios includes the uncertainty with offsetting as well as the time lag it takes for offsetting projects to become productive. Conventional offsetting creates an impact today and the offset becomes functional at a later date. There are different reasons to use ratios with size of impact versus the size of the offset. Sometimes, when there is uncertainty that offsetting will work, a proponent may build more of it with the intent that most will work; this is then monitored over a period of time.

- There is not a standard "across the board" ratio used. Ratios are determined on a project-by-project basis and it is by habitat type that is being impacted, as well as habitat type being proposed for offsetting. For example, it's easy to understand the currency exchange between eelgrass to eelgrass but it is more difficult to understand the exchange between mudflat to eelgrass.
- A ledger documenting habitat types is useful in making decisions with offsetting measures but there is no magical formula. There is a lot of biology, a lot of formulas and site specifics in each case, related to productivity values.
- There is no across the board type ratio. Offsetting is based on a certain amount of professional judgement by each assessor, DFOs management and the information provided by the Proponent.

A comment was made regarding the Roberts Bank area, where there was log/wood debris removal, trying to offset the loss of the aquatic component. DFO added that based on what you're trying to achieve and the site specifics, you might have to adapt plans (through pre-project planning and assessment) and see what the right offset is for the right impact, takes a lot of the guess work out of it.

DFO advised that with the 2012 changes to the *Fisheries Act*, one of the policies that was formalized was the offsetting policy, and later an interim policy for habitat banking was brought forward. One of the recent proposed changes to the *Fisheries Act* is that it may now include habitat banking within the Act itself. DFO may do more of this type of work with upcoming changes to the *Fisheries Act*. It's hard to know in terms of legislation but we are fairly sure that there will be more formalized work in support of habitat banking.

A request was made for DFO to provide examples of where habitat banking was not considered sufficient by either the regulator or Aboriginal group. A follow up question was asked on what occurs when there is a disagreement in sufficiency. DFO advised that it has happened (no specific file details available) but that generally if a proposal comes up and it's not enough to provide fulsome offsetting and/ or is not adequate for the offset, more of a withdrawal may be needed from a proponent's the habitat bank.

VFPA was asked if they are planning to use any of their habitat credits. VFPA responded that they currently do not have any withdrawals proposed from the habitat bank but, they may propose to do so in the future.

A statement was made regarding appreciation for habitat enhancement and that with fish and fish habitat losses, there may be a real need for this type of approach to secure areas for the future.

Clarity and confirmation was sought regarding a concern with habitat banking - that there is no guarantee that future projects will be approved, that certain types of impacts will be considered on their own and not necessarily be approved just because there is a habitat

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

bank to offset them. DFO confirms this and advises that proponents of infrastructure projects must be able to demonstrate the projects impacts are unavoidable, and how these impacts will be offset. Consideration may be given to the use of credits as offsetting but it does not affect the decision. The existence of a habitat bank is not a deciding factor on whether or not to issue an Authorization. As well, before DFO makes any regulatory decision, DFO is required to consult with First Nations.

There was ensuing discussion regarding DFO's decision making processes and whether DFO's program is well-resourced and/or whether changes to the *Fisheries Act* are likely to affect resources. DFO does not have specific information pertaining to resourcing per se, but expects that the resources dedicated to habitat banking are unlikely to change.

The goals of the information session were reconfirmed as:

- DFO: Information sharing on the existing DFO-VFPA habitat banking agreement and proposed new arrangement with VFPA as the current agreement is expiring shortly. The goal was to provide information on what habitat banking is and the associated policies that provide for its use.
- VFPA: HEP has been working with many communities in the delivery of its projects. The goal was to provide opportunity to share the process VFPA has been using and request input as to whether there are any concerns with the process or ideas to improve processes.
- VFPA is interested in identifying ideas and projects from First Nation communities. VFPA feels that it is an opportunity get feedback in order to improve or enhance projects and it is intended to be an ongoing communication.

A commitment was made by VFPA and DFO to share a summary record of the discussions and to provide these to the attendees for review and feedback.

<End of Session>



VANCOUVER FRASER PORT AUTHORITY  
MEETING NOTES

## VFPA HEP & DFO Information Session with Aboriginal Groups

Date: Thursday, November 29, 2018  
Time: 9:00 a.m. to 11:30 a.m.  
Location: People of the River Referrals Office, Building #10, 7201 Vedder Rd, Chilliwack, BC, V2R 4G5

### Participants

People of the River Referrals Office (PRRO): Vancouver Fraser Port Authority  
Jemma Scoble  
Charlotte Olson  
Gord Ruffo

Lower Fraser Fisheries Alliance

Fisheries and Oceans Canada  
Shona Smith  
Suzanne Thorpe

### Agenda

- | #  | Item   |
|----|--|
| 1. | Introductions  |
| 2. | VFPA Presentation <ul style="list-style-type: none"><li>• Objectives of Information Session</li><li>• Overview of VFPA's Habitat Enhancement Program</li><li>• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li><li>• Project example: New Brighton Park Shoreline Habitat Restoration Project</li></ul> |
| 3. | DFO Presentation <ul style="list-style-type: none"><li>• Requirements for Fisheries Act Authorizations</li><li>• Proponent-led habitat banking</li><li>• Habitat banking arrangements</li></ul>  |
| 4. | Questions and General Discussion   |

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### Notes

#### Meeting summary:

The PRRO informed VFPA/DFO of a new Federal Protocol Agreement that they are close to executing. It is a consultation and engagement protocol that outlines how the federal government will consult with the 16 Nations PRRO coordinates. The Federal Protocol Agreement process will be embedded in the existing SEA process and will be very helpful for leadership and members of 16 communities. It was noted that there are some agencies that aren't part of SEA, like MOTI, and that this may continue to be a challenge. However, at the provincial level PRRO is coordinating with a number of First Nations organizations on a

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

shared decision-making forum with 4 different Provincial ministries (as a 3-year pilot program).

### <Review of agenda>

PRRO representatives advised that PRRO does not consider the meeting to be 'Consultation' as PRRO is not a rights holding body.

[*Additional note*: The above referenced statement is understood by VFPA/ DFO. The purpose of the meeting was not to engage in formal consultation (i.e., there is no formal regulatory decision being made under a federal Act) but to engage with First Nations to seek feedback on the Habitat Banking Arrangement and its associated proposed processes for continued dialogue and information sharing].

### <VFPA presentation>

VFPA discussed the purpose for the meeting, which was to:

- Share information on VFPA's consultation process used for delivery of habitat project that are proposed for the VFPA habitat bank.
- Obtain input on VFPA's consultation process used for habitat projects.
- Provide information on how habitat banks are used to offset infrastructure projects.

Discussions were held with regard to the areas in which VFPA has jurisdiction (slide 8). It was noted that the Harrison River was an example of a potential habitat restoration area/ opportunity which is located outside of VFPA jurisdiction but that may be interconnected/ linked to VFPA jurisdictional areas. [*Additional note*: and therefore may be appropriate to consider for habitat restoration opportunities].

The former VFPA/Provincial Head Lease was discussed and VFPA noted that some projects are proposed within the Provincial area on the North Arm of the Fraser River (e.g. ex-Head Lease Area), and that the North Arm is heavily industrialized. Clarity was provided regarding provincial jurisdiction – that that provincial land includes the river bed in the area. Referencing the map on slide 8, VFPA also advised where federal/ provincial/ municipal lands are in relation to this area. Concern was expressed by PRRO regarding the lack of improvements on the North Arm and in management of the Fraser River.

VFPA explained that in terms of projects, that the City of Richmond has partnered and been engaged on the proposed South Arm Jetty Tidal Marsh Project, among others. Richmond's interest is that they are a city that is located below the ocean's high water mark, and with sea level rise, they are looking at long term opportunities to protect the city. As well, the Glenrose Tidal Marsh Project was discussed as an example of VFPA advancing a First Nations priority project.

A question was asked regarding how fisheries productivity is considered given that it is hard to quantify. VFPA explained how increases in productivity can be demonstrated. As a proponent, VFPA needs to show there will be measurable fisheries benefits in advance, and prove this out during post-construction, comparing restored habitat to the existing conditions.

A follow-up question was asked about whether or not habitat projects consider all species of fish. VFPA confirmed that habitat projects target improvements for all aquatic species, not just salmon, and that the projects target multi-ecological functions.



## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Eulachon, a federally-listed Species at Risk, was discussed after there was a query about whether or not VFPA was working with the Species at Risk program. VFPA responded that they recently contributed to programs and studies on the Fraser R, including LFFAs work on eulachon. DFO explained that the Species at Risk program is another unit in DFO's Ecosystem Management Branch, and that if there was a proposed banking project that her team was looking at that would provide productivity benefits to eulachon, they FPP would coordinate and discuss this with SAR program staff (and management). A further note was made by VFPA regarding Southern Resident Killer Whales (SRKW), also listed, that critical habitat is part of project considerations, specifically related to any activities such as dredging in such areas, and that permitting is required.

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With regard to the proposed phases of VFPA habitat project delivery and its associated consultation process, it was asked how VFPA determines who is consulted. VFPA explained their process includes general engagement on HEP (as a program) as well as consultation on specific projects.

There was discussion about project maintenance costs. VFPA explained that project objectives include ensuring that projects function for the long-term and that they are as maintenance free as possible. VFPA explained there have been many lessons learned over the years of completing restoration projects and provided an example of Canada geese feeding on young marsh plants and having to then snow-fence off the areas to exclude goose access until the marsh plants establish. VFPA advised that some habitat has to be managed over the short term. VFPA has a budget for this, understanding that maintenance costs will somewhat depend on the project and its size. It could be 0-10% of the overall project delivery cost. If designed, constructed, and maintained properly VFPA indicated that project sites should not require long maintenance requirements (e.g. >5yrs).

DFO added that habitat banking projects are completed in advance (of any infrastructure project) and that annual monitoring is required. The monitoring results are reviewed by DFO. If the site is functioning and self-sustaining then monitoring requirements may be reduced. The whole purpose is to build sustainable projects, so if the project is not performing, it can be identified early and addressed.

A comment was made regarding the historic impacts of port activities. There was concern that VFPA would never be able to do enough to address all the past damages. There was discussion that addressing historic impacts for every Nation within the port's jurisdiction would be very difficult but that one of the benefits of the banking program is that habitat is created as a benefit now, as the habitat credits are not being used (right away) to offset an infrastructure project. It was acknowledged that there has been a historic loss of streams and wetlands, from a variety of historic development in the Fraser River estuary.

A comment was made regarding the change in terminology with use of "offsetting" and DFO noted that it replaces the terminology 'habitat compensation'.

VFPA was asked to clarify how much is being spent over next 10 years on banking projects. VFPA responded that there is no committed spending in place, but there are priority projects identified for the habitat bank. VFPA's habitat bank is funded as a capital program with a budget in the multi-million dollar range with no time restrictions on it. VFPA advised that habitat restoration projects take a lot of time to complete (planning to completion of monitoring) and that VFPA has approximately \$10 million over the next 4 years, to deliver on current priority projects.

RE: New Brighton Park project:

HEP VFPA-DFO Meeting with People of the River Referrals Office – November 29, 2018  
*Draft for internal use only. Accuracy of statements has not been confirmed.* | Page 3 of 8

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Historic fill was placed in the NBP project area from historic upland construction and development activities within City of Vancouver.

Juvenile salmonids, including coho, have been observed using the constructed lagoon. VFPA has Go-Pro camera video footage of salmonid use of the area.

DNA analysis has not been undertaken to determine what designable unit the salmonids are from; however, VFPA is interested in exploring this. Participants noted that it would be good to see what stocks are using these areas as there is a lack of information in terms of juvenile salmon use of estuaries, especially for Chinook. Burrard Inlet is considered to be a vital estuary and there is a lack of information on fish populations. DFO/VFPA were advised that there are DNA banks for all 25 types of sockeye on the Fraser and that since DNA testing is now more affordable now it should be good considered for the foreshore habitat projects that VFPA is completing (permitting dependent). New research from UBC is indicating that juvenile salmon use estuary more than previously thought. This information may help further develop the knowledge based regarding species of conservation concern, as well as to leverage funding.

- VFPA advised that NBP cost approximately \$1.5M for construction, and overall \$3M for full delivery.

- To complete the project about 17000m<sup>3</sup> needed to be disposed offsite due to contamination. The contractor also created landscaped berms in the park utilizing the clean materials. Soil and groundwater analysis is completed early to determine contamination levels. This is a driving factor for some projects as disposal costs are high. For NBP, 20 boreholes were drilled; soil and groundwater testing was completed ~ 2 years before construction.

The creek outlet to the lagoon is from a City of Vancouver storm main overflow/diversion. It has no fisheries values and fish-access is limited due to its limited connectivity/water flow and grade so the 'creek connection' was not meant to be for fisheries access. The creek is a park feature connection that the City asked for as part of the Renfrew Revitalization Project. Within the wetland, the aquatic species are salt-water species; freshwater flows from the constructed creek are very low. The general understanding of the Renfrew Revitalization Project is that it provided opportunity for day-lighting a portion of the upland stream features, and some storm-water attenuation, and increased biodiversity around the stream channel (e.g. plantings).

### <DFO presentation>

DFO advised that the *Fisheries Act* is going through the review processes for legislative change and that the currently proposed new Act is with the Senate. There is no update regarding the timing of process completion but it is in its second reading. It is anticipated that, if accepted, Bill C-68's Royal Assent would be by June 2019, but this is not confirmed and it is dependent on parliamentary process. DFO is not expecting huge changes to policy, but there could be new guidance on habitat banking and/or the process may become a regulated process – with monitoring requirements.

VFPA commented that there are requirements for monitoring of VFPA habitat banking projects, per our current Agreement with DFO.

DFO also noted that it is anticipated with the revised Act there will be a transition back to HADD, possibly coupled with serious harm terminology. Feedback from Canadians during fisheries review was incorporated into the new Act and as a result, it is anticipated there will be program and policy changes that take into account the lost protections and modern

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

safeguards needed to protect fish and fish habitat. DFO added that the Fisheries Protection Program is already moving to develop an integrated watershed planning unit that will be more involved in land-use type processes.

During the presentation a question was asked about what chemical or biological manipulation would be. DFO advised that so far, it has not been contemplated for habitat banking. Chemical or biological manipulation is a potential option under the offsetting policy but it would be completed as part of a major project being undertaken, or where no other options exist. As an example, this could be the development of a fish hatchery.

There was some discussion regarding the Brown Creek wetland development. The removal of anthropogenic barriers to fish migration was also discussed including dam or culvert removal (streams daylighting). Habitat creation was discussed and the example referencing NBP, which created habitat out of an area that was land based. The Brown Creek wetlands are also an example of habitat 'creation'. For that project and others, DFO's Resource Restoration Unit works with partners to create new fish habitat, and there are funding programs available for interest groups and First Nation's organization to apply for funding for this type of work (e.g., Recreational Fisheries Conservation Partnership Program, Coastal Restoration Fund).

A question was asked if credits are transferable between locations. DFO advised they probably wouldn't want a development project in Vancouver harbour to be offset by a offset (i.e., conservation/ restoration project) on Vancouver Island.

A follow-up question was asked regarding whether or not the area of coverage is determined from habitat as an input and output (for example if you built 100m<sup>2</sup> of habitat and the project physically impacts 100m<sup>2</sup> but has downstream effects, how is that calculated?). DFO advised that when habitat credits are placed in a bank, it is based on the straight up credit or area in m<sup>2</sup> built. When DFO assesses impacts in relation to a proposed project it is at that time that the Department may consider other trade-offs for impacts or different methods to calculate productivity. There tends to still be a hierarchy for looking at offsets with the use of "like for like" for-like being easiest to account for, then "like for unlike". DFO considers productivity and how it is accounted for. It is the responsibility of a Proponent to come with plan and DFO would negotiate the values to develop an Authorization or other agreement from there.

A question was asked regarding ratios and how they are applied. DFO responded that the under the new Act there may be additional guidance or policy on this but that for the most part DFO looks at available research on productivity and productivity values and uses national guidance on this.

As a follow-up question it was asked if, at end of the negotiations - at the Proponent's end - whether or not the input/ output of habitat is equal or whether or not it is project dependent. DFO advised that it is different for each project as it depends on the project scope. Some examples were provided and there was discussion on the value of the habitat being impacted, whether it is entirely lost or just some capacity reduced. As well, DFO may have to consider whether or not water levels are affected and whether or not fish have access to areas in critical times of the year. DFO explained that the habitat assessors rely on the data presented and follow program guidance and 'rules of thumb'. Assessors generally try to use established productivity science for their analysis. There was some further discussion on credit values for "opening up a whole bunch of upland habitat" area and DFO commented that the value of credit given would not be for the habitat that already

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

exists but there may be some form of credit given to the removal of a structure preventing access.

Consultation was discussed and a question was asked about whether or not DFO delegates the procedural aspects of consultation to the Proponent. DFO responded yes and no, that there is some negotiation on it but that DFO consults when making a regulatory decision. On the VFPA-DFOOF Arrangement, the undertaking is more engagement than consultation as there is no legal authority being exercised in making a decision. VFPA also advised that they are looking for input on the processes for engagement and consultation and that VFPA is undertaking consultations for each banking project. DFO added that currently, in the process, the stage is considered to be "early engagement".

The process for credit calculation was discussed as well as how it is documented. DFO explained that the process is probably most applicable to large-scale proponents having larger land management areas. DFO has 4 current regional arrangements (VFPA, TimberWest, BC Timber Sales, Dept. National Defense). [Additional note: Small Craft Harbours holds a national Arrangement], and several municipalities (and others) have shown a high degree of interest in developing habitat banks].

The current VFPA/DFO agreement (to be renewed as an "Arrangement"), has been in place since 2012 and VFPA/DFO are meeting with PRRO because DFO is renewing the agreement with VFPA for continued use of the bank.

A comment was made that there were questions and concerns regarding the *Fisheries Act* during the *Fisheries Act* review process that were never addressed from an Indigenous perspective and that the feedback process was too fast. DFO explained that explained a lot a number of Indigenous organizations and groups submitted similar submissions and that specifically related to the 'Section 6' factors there were a number of items recommended for change, including cumulative effects, consultation and use of a precautionary approach. As far as DFO is aware all of the recommendations have been considered for incorporation into the new Act. As well, there is likely to be a strong Indigenous voice as the current government is extremely interested in pushing the reconciliation agenda forward.

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A comment was made regarding the amount of development within First Nation territory. The new federal protocol has language around engagement and is fairly general, but First Nations may have the capacity to properly engage on issues, and understand that there is a responsibility to move forward with the federal government. Specifically the LFFA is very entrenched in federal consultation. At the Tribal Council level, a cautious approach is being taken. It was noted that some work is being undertaken through the federal consultation network, specifically with Angela Stadel, Manager Consultations, Strategic Policy at DFO. There was general support to continue such actions. It was noted that DFO is expanding its consultation teams, but there is also concern regarding consultation fatigue.

### **DFO made a commitment to ensure that FPP staff are informed about the federal consultation network.**

There was some discussion regarding the status and timing of signatures for the Federal Protocol Agreement, which represents the first of this type of agreement in western Canada (as far as participants are aware). Funding is still being considered. There was subsequent discussion that the PRRO could assist DFO with informing First Nations of the legislative changes and regional organizational changes as these come about.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Discussion on the upcoming VFPA-DFO Arrangement centered on the term of the renewed agreement. VFPA advised that the former agreement was 5 for years and was extended by DFO over the last 2 years; it expires March 2019. VFPA has been working on process with DFO about what the new agreement looks like. The intent is to have a 10-15-year time frame and to execute the arrangement in Q1 2019. DFO also noted that the arrangement includes a 5-year agreement review clause.

DFO confirmed that the other banking agreement renewal will very likely to occur after new Act comes into effect.

DFO added that there will be other points of engagement with First Nations when new policies are being contemplated. Once legislation changes, policies also have to be modified to reflect the changes. Discussion with Indigenous groups could pertain to regulations, for example, like that for the information requirements and timeline regulations put into force, or would be if habitat banking is contemplated as a new regulation. All proposed regulations require consultation. So, DFO is certain there will be continued be engagement and consultation on policies under a new Act.

A comment was made regarding input on the new policies, specific to productivity. DFO advised they are interested in any input, feedback and ideas about productivity and how it could be measured.

Additional meetings were suggested when the DFO-VFPA arrangement is in place, and there is further movement on the Federal Protocol Agreement. A workshop was also suggested.

Additional information was provided from First Nations that there are concerns regarding the health of and access to marine aquatic species, specifically clam beds, noting there has been cultural losses for communities like Semiahmoo. VFPA responded that there has been interest from Indigenous groups on VFPA hosting a clam bed workshop and this is something that is being considered for 2019.

VFPA was asked about their involvement in flood management, noting it is an unfunded process and is hard for First Nations to participate. VFPA's responded that their Environmental Programs Department is working on stormwaterflood management and confirmed that VFPA HEP considers sea level rise is considered in coastal engineering designs for each habitat project that VFPA undertakes. VFPA uses best available science and complies with, or exceeds, provincial guidelines. Habitat is built to be resilient with the elevation range species are able to survive at.

A past meeting with Port directors regarding navigation and a longer term plan around Harrison, related to a transfer station which had implications for fish and fish habitat was discussed. It was explained that First Nations have vision as Indigenous people, about what foreshore would look like, how water flows and comes back, river cycles, fish species seasonality, etc. A concern was raised that the current fisheries window is based on interior Nicola Thompson Coho but that interior Coho are entirely different from Lower Fraser Coho in run and spawning timing as well as incubation. Another concern raised was related to dredging near, or of, eulachon spawning grounds. PRRO/LLFA interests are to look after all the life forces in First Nations territory as well as meeting objectives that are based on cultural traditions.

Recommendations were made as follow up from the meeting:

- It was suggested VFPA consider the opportunity of funding and participating in the foreshore management symposium. From an Indigenous perspective, there is a

HEP VFPA-DFO Meeting with People of the River Referrals Office – November 29, 2018  
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## **VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES**

high importance on the need for a long term foreshore management plan that would help resolve jurisdictional (municipal) challenges and provide solutions to managing the foreshore. It was also suggested VFPA and others tackle known issues such as flooding, water retention, navigation, dredging, and gravel removal. A like-mindedness document could come out of such a symposium.

The Fraser Watershed Restoration Initiative was mentioned as well. The initiative has involvement of a number of ENGOS. The need for assembling, for example a \$500M fund for the entire Fraser river watershed has been proposed – a very ambitious, far-reaching and exciting initiative that PRRO would support participation in.

VFPA advised that there is a large scope of work the Habitat Enhancement Program/team is involved in and it includes a number of initiatives through their different departments.

The People of the River conference was brought up as a two-day event that could provide opportunity to look at what people are doing in the territory. It was proposed that VFPA/DFO/PRRO could present to the communities and also hear what is going on in First Nations communities. A statement was made that often people take ITK and use it but don't report back to knowledge holders/community so the conference could represent a chance to bring it back to communities, full circle.

**Summary notes from the meeting were requested and VFPA/ DFO committed to providing high level summary notes to participants and interested First Nation organizations/ groups.**

### **Documents provided**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. DFO Presentation - Overview of Proponent-led Habitat Bank
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

### **Note taker**

Jemma Scoble

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**From:** Fanos, Brad  
**Sent:** Friday, January 11, 2019 9:52 AM  
**To:** 'Assier, Gilles'  
**Subject:** RE: Vancouver Fraser Port Authority projects update

Hi Gilles

Thanks for reaching out and yes I would like to connect with you on these items and general DFO FPP Port coordination. The week of Jan 21 is better for me, if you are available I will set a time to meet for coffee.

On a more urgent matter is there any update on the Port's dialogue with other federal, provincial, municipal or Indigenous groups on revitalization of FREMP/BIEAP. I have had some senior management inquiries today and thought I would check with you directly.

thanks  
Brad

**Brad Fanos**  
Director, Fish and Fish Habitat Protection Program  
Ecosystem Management Branch  
Fisheries and Oceans Canada / Government of Canada  
[brad.fanos@dfo-mpo.gc.ca](mailto:brad.fanos@dfo-mpo.gc.ca) / Tel: 604-666-3909 / Cell: 604 789 3201

Directeur, Programme de la protection du poisson et de son habitat  
Gestion des écosystèmes  
Pêches et Océans Canada / Gouvernement du Canada  
[brad.fanos@dfo-mpo.gc.ca](mailto:brad.fanos@dfo-mpo.gc.ca) / tél : 604-666-3909 / cell : 604-789-3201

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**From:** Assier, Gilles [<mailto:Gilles.Assier@portvancouver.com>]  
**Sent:** January-09-19 10:26 AM  
**To:** Fanos, Brad  
**Cc:** Assier, Gilles  
**Subject:** Vancouver Fraser Port Authority projects update

Hi Brad,

All the best for 2019 and congratulations on your new position! Al Magnan mentioned the several great changes happening at DFO this year and my team plans to meet in February with him and James Hwang.

Separately, I would like to see if we could meet for 30 min in the near future so that I can update you on the portfolio of projects I am overseeing, the key ones being:

- Centerm Expansion project for which we received an FAA last November
- Maplewood project the main portion of which is going to be used as direct offset for the Centerm project
- Our new DFO-VFPA habitat banking arrangement planned to be signed by March 2019
- Other collaboration activities with DFO

Please let me know and I can drop by at your convenience in the next couple of weeks.

**Regards,**

**Gilles Assier**

Director, Container Terminal Construction



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604-665-9078 | CELL: 778-231-4394  
[portvancouver.com](http://portvancouver.com)

No information has been removed or severed from this page



**From:** Lien, Meaghan on behalf of Scoble, Jemma  
**Sent:** Friday, January 11, 2019 3:40 PM  
**To:** Matt McGinity; Mike Goold; Tannis Tommy; Amber Kostuchenko; Ernie Victor; aidan.fisher@lffa.ca  
**Subject:** VFPA-DFO Habitat Banking Workshop - Draft Meeting Notes  
**Attachments:** 2018-11-29-VFPA-DFO\_AG Meeting Notes-Chilliwack-DRAFT.pdf  
**Categories:** Delta

Good afternoon,

Please find the attached draft meeting summary from the Habitat Enhancement Workshop held on November 29, 2018.

Do not hesitate to contact me if there are any questions or concerns.

Regards,

**Jemma Scoble**  
Aboriginal Consultation Support



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9000 | C: 778.822.7240  
[portvancouver.com](http://portvancouver.com)

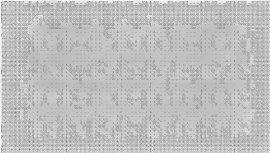
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## VFPA HEP & DFO Information Session with Aboriginal Groups

Date: Thursday, November 29, 2018  
Time: 9:00 a.m. to 11:30 a.m.  
Location: People of the River Referrals Office, Building #10, 7201 Vedder Rd,  
Chilliwack, BC, V2R 4G5

### Participants

People of the River Referrals Office (PRRO): Vancouver Fraser Port Authority



Jemma Scoble  
Charlotte Olson  
Gord Ruffo

Lower Fraser Fisheries Alliance



Fisheries and Oceans Canada

Shona Smith  
Suzanne Thorpe

### Agenda

- | #  | Item   |
|----|--|
| 1. | Introductions  |
| 2. | VFPA Presentation <ul style="list-style-type: none"><li>Objectives of Information Session</li><li>Overview of VFPA's Habitat Enhancement Program</li><li>Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li><li>Project example: New Brighton Park Shoreline Habitat Restoration Project</li></ul> |
| 3. | DFO Presentation <ul style="list-style-type: none"><li>Requirements for Fisheries Act Authorizations</li><li>Proponent-led habitat banking</li><li>Habitat banking arrangements</li></ul>  |
| 4. | Questions and General Discussion   |

### Notes

#### Meeting summary:

The PRRO informed VFPA/DFO of a new Federal Protocol Agreement that they are close to executing. It is a consultation and engagement protocol that outlines how the federal government will consult with the 16 Nations PRRO coordinates. The Federal Protocol Agreement process will be embedded in the existing SEA process and will be very helpful for leadership and members of 16 communities. It was noted that there are some agencies that aren't part of SEA, like MOTI, and that this may continue to be a challenge. However, at the provincial level PRRO is coordinating with a number of First Nations organizations on a shared decision-making forum with 4 different Provincial ministries (as a 3-year pilot program).

## DRAFT MEETING NOTES

### <Review of agenda>

PRRO representatives advised that PRRO does not consider the meeting to be 'Consultation' as PRRO is not a rights holding body.

[Additional note]: The above referenced statement is understood by VFPA/ DFO. The purpose of the meeting was not to engage in formal consultation (i.e., there is no formal regulatory decision being made under a federal Act) but to engage with First Nations to seek feedback on the Habitat Banking Arrangement and its associated proposed processes for continued dialogue and information sharing].

### <VFPA presentation>

VFPA discussed the purpose for the meeting, which was to:

- Share information on VFPA's consultation process used for delivery of habitat project that are proposed for the VFPA habitat bank.
- Obtain input on VFPA's consultation process used for habitat projects.
- Provide information on how habitat banks are used to offset infrastructure projects.

Discussions were held with regard to the areas in which VFPA has jurisdiction (slide 8). It was noted that the Harrison River was an example of a potential habitat restoration area/opportunity which is located outside of VFPA jurisdiction but that may be interconnected/linked to VFPA jurisdictional areas. [Additional note]: and therefore may be appropriate to consider for habitat restoration opportunities].

The former VFPA/Provincial Head Lease was discussed and VFPA noted that some projects are proposed within the Provincial area on the North Arm of the Fraser River (e.g. ex-Head Lease Area), and that the North Arm is heavily industrialized. Clarity was provided regarding provincial jurisdiction – that provincial land includes the river bed in the area. Referencing the map on slide 8, VFPA also advised where federal/ provincial/ municipal lands are in relation to this area. Concern was expressed by PRRO regarding the lack of improvements on the North Arm and in management of the Fraser River.

VFPA explained that in terms of projects, the City of Richmond has been engaged on the proposed South Arm Jetty Tidal Marsh Project, among others. Richmond's interest is that they are a city that is located below the ocean's high water mark, and with sea level rise, they are looking at long term opportunities to protect the city. As well, the Glenrose Tidal Marsh Project was discussed as an example of VFPA advancing a First Nations priority project.

A question was asked regarding how fisheries productivity is considered given that it is hard to quantify. VFPA explained how increases in productivity can be demonstrated. As a proponent, VFPA needs to show there will be measurable fisheries benefits in advance, and prove this out during post-construction, comparing restored habitat to the existing conditions.

A follow-up question was asked about whether or not habitat projects consider all species of fish. VFPA confirmed that habitat projects target improvements for all aquatic species, not just salmon, and that the projects target multi-ecological functions.

Eulachon, a federally-listed Species at Risk, was discussed after there was a query about whether or not VFPA was working with the Species at Risk program. VFPA responded that they recently contributed to programs and studies on the Fraser R, including LFFAs work on

## DRAFT MEETING NOTES

eulachon. DFO explained that the Species at Risk program is another unit in DFO's Ecosystem Management Branch, and that if there was a proposed banking project that would provide productivity benefits to eulachon, FPP would coordinate and discuss this with SAR program staff (and management). A further note was made by VFPA regarding Southern Resident Killer Whales (SRKW), also listed, that critical habitat is part of project considerations, specifically related to any activities such as dredging in such areas, and that permitting is required.

With regard to the proposed phases of VFPA habitat project delivery and its associated consultation process, it was asked how VFPA determines who is consulted. VFPA explained their process includes general engagement on HEP (as a program) as well as consultation on specific projects.

There was discussion about project maintenance costs. VFPA explained that project objectives include ensuring that projects function for the long-term and that they are as maintenance free as possible. VFPA explained there have been many lessons learned over the years of completing restoration projects and provided an example of Canada geese feeding on young marsh plants and having to then snow-fence off the areas to exclude goose access until the marsh plants establish. VFPA advised that some habitat has to be managed over the short term. VFPA has a budget for this, understanding that maintenance costs will somewhat depend on the project and its size. It could be 0-10% of the overall project delivery cost. If designed, constructed, and maintained properly VFPA indicated that project sites should not require long maintenance requirements (e.g. >5yrs).

DFO added that habitat banking projects are completed in advance (of any infrastructure project) and that annual monitoring is required. The monitoring results are reviewed by DFO. If the site is functioning and self-sustaining then monitoring requirements may be reduced. The whole purpose is to build sustainable projects, so if the project is not performing, it can be identified early and addressed.

A comment was made regarding the historic impacts of port activities. There was concern that VFPA would never be able to do enough to address all the past damages. There was discussion that addressing historic impacts for every Nation within the port's jurisdiction would be very difficult but that one of the benefits of the banking program is that habitat is created as a benefit now, as the habitat credits are not being used (right away) to offset an infrastructure project. It was acknowledged that there has been a historic loss of streams and wetlands, from a variety of historic development in the Fraser River estuary.

A comment was made regarding the change in terminology with use of "offsetting" and DFO noted that it replaces the terminology 'habitat compensation'.

VFPA was asked to clarify how much is being spent over next 10 years on banking projects. VFPA responded that there is no committed spending in place, but there are priority projects identified for the habitat bank. VFPA's habitat bank is funded as a capital program with a budget in the multi-million dollar range with no time restrictions on it. VFPA advised that habitat restoration projects take a lot of time to complete (planning to completion of monitoring) and that VFPA has approximately \$10 million over the next 4 years, to deliver on current priority projects.

RE: New Brighton Park project:

- Historic fill was placed in the NBP project area from historic upland construction and development activities within City of Vancouver.

## DRAFT MEETING NOTES

- Juvenile salmonids, including coho, have been observed using the constructed lagoon. VFPA has Go-Pro camera video footage of salmonid use of the area.
- DNA analysis has not been undertaken to determine what designable unit the salmonids are from; however, VFPA is interested in exploring this. Participants noted that it would be good to see what stocks are using these areas as there is a lack of information in terms of juvenile salmon use of estuaries, especially for Chinook. Burrard Inlet is considered to be a vital estuary and there is a lack of information on fish populations. DFO/VFPA were advised that there are DNA banks for all 25 types of sockeye on the Fraser and that since DNA testing is now more affordable now it should be good considered for the foreshore habitat projects that VFPA is completing (permitting dependent). New research from UBC is indicating that juvenile salmon use estuary more than previously thought. This information may help further develop the knowledge based regarding species of conservation concern, as well as to leverage funding.
- VFPA advised that NBP cost approximately \$1.5M for construction, and overall \$3M for full delivery.
- To complete the project about 1000m<sup>3</sup> needed to be disposed offsite due to contamination. The contractor also created landscaped berms in the park utilizing the clean materials. Soil and groundwater analysis is completed early to determine contamination levels. This is a driving factor for some projects as disposal costs are high. For NBP, 20 boreholes were drilled; soil and groundwater testing was completed ~ 2 years before construction.
- The creek outlet to the lagoon is from a City of Vancouver storm main overflow/diversion. It has no fisheries values and fish-access is limited due to its limited connectivity/water flow and grade so the 'creek connection' was not meant to be for fisheries access. The creek is a park feature connection that the City asked for as part of the Renfrew Revitalization Project. Within the wetland, the aquatic species are salt-water species; freshwater flows from the constructed creek are very low. The general understanding of the Renfrew Revitalization Project is that it provided opportunity for day-lighting a portion of the upland stream features, storm-water attenuation, and increased biodiversity around the stream channel (e.g. plantings).

### <DFO presentation>

DFO advised that the *Fisheries Act* is going through the review processes for legislative change and that the currently proposed new Act is with the Senate. There is no update regarding the timing of process completion but it is in its second reading. It is anticipated that, if accepted, Bill C-68's Royal Assent would be by June 2019, but this is not confirmed and it is dependent on parliamentary process. DFO is not expecting huge changes to policy, but there could be new guidance on habitat banking and/or the process may become a regulated process – with monitoring requirements.

VFPA commented that there are requirements for monitoring of VFPA habitat banking projects, per our current Agreement with DFO.

DFO also noted that it is anticipated with the revised Act there will be a transition back to HADD, possibly coupled with serious harm terminology. Feedback from Canadians during fisheries review was incorporated into the new Act and as a result, it is anticipated there will be program and policy changes that take into account the lost protections and modern safeguards needed to protect fish and fish habitat. DFO added that the Fisheries Protection Program is already moving to develop an integrated watershed planning unit that will be more involved in land-use type processes.

## DRAFT MEETING NOTES

During the presentation a question was asked about what chemical or biological manipulation would be. DFO advised that so far, it has not been contemplated for habitat banking. Chemical or biological manipulation is a potential option under the offsetting policy but it would be completed as part of a major project being undertaken, or where no other options exist. As an example, this could be the development of a fish hatchery.

There was some discussion regarding the Brown Creek wetland development. The removal of anthropogenic barriers to fish migration was also discussed including dam or culvert removal (streams daylighting). Habitat creation was discussed and the example referencing NBP, which created habitat out of an area that was land based. The Brown Creek wetlands are also an example of habitat 'creation'. For that project and others, DFO's Resource Restoration Unit works with partners to create new fish habitat, and there are funding programs available for interest groups and First Nation's organization to apply for funding for this type of work (e.g., Recreational Fisheries Conservation Partnership Program, Coastal Restoration Fund).

A question was asked if credits are transferable between locations. DFO advised they probably wouldn't want a development project in Vancouver harbour to be offset by a offset (i.e., conservation/ restoration project) on Vancouver Island.

A follow-up question was asked regarding whether or not the area of coverage is determined from habitat as an input and output (for example if you built 100m<sup>2</sup> of habitat and the project physically impacts 100m<sup>2</sup> but has downstream effects, how is that calculated?) DFO advised that when habitat credits are placed in a bank, it is based on the straight up credit or area in m<sup>2</sup> built. When DFO assesses impacts in relation to a proposed project it is at that time that the Department may consider other trade-offs for impacts or different methods to calculate productivity. There tends to still be a hierarchy for looking at offsets with the use of "like for like" being easiest to account for, than "like for unlike". DFO considers productivity and how it is accounted for. It is the responsibility of a Proponent to come with plan and DFO would negotiate the values to develop an Authorization or other agreement from there.

A question was asked regarding ratios and how they are applied. DFO responded that the under the new Act there may be additional guidance or policy on this but that for the most part DFO looks at available research on productivity and productivity values and uses national guidance on this.

As a follow-up question it was asked if, at end of the negotiations - at the Proponent's end - whether or not the input/ output of habitat is equal or whether or not it is project dependent. DFO advised that it is different for each project as it depends on the project scope. Some examples were provided and there was discussion on the value of the habitat being impacted, whether it is entirely lost or just some capacity reduced. As well, DFO may have to consider whether or not water levels are affected and whether or not fish have access to areas in critical times of the year. DFO explained that the habitat assessors rely on the data presented and follow program guidance and 'rules of thumb'. Assessors generally try to use established productivity science for their analysis. There was some further discussion on credit values for "opening up a whole bunch of upland habitat" area and DFO commented that the value of credit given would not be for the habitat that already exists but there may be some form of credit given to the removal of a structure preventing access.

Consultation was discussed and a question was asked about whether or not DFO delegates the procedural aspects of consultation to the Proponent. DFO responded yes and no, that

## DRAFT MEETING NOTES

there is some negotiation on it but that DFO consults when making a regulatory decision. On the VFPA-DFO Arrangement, the undertaking is more engagement than consultation as there is no legal authority being exercised in making a decision. VFPA also advised that they are looking for input on the processes for engagement and consultation and that VFPA is undertaking consultations for each banking project. DFO added that currently, in the process, the stage is considered to be "early engagement".

The process for credit calculation was discussed as well as how it is documented. DFO explained that the process is probably most applicable to large-scale proponents having larger land management areas. DFO has 4 current regional arrangements (VFPA, TimberWest, BC Timber Sales, Dept. National Defense). [*Additional note*: Small Craft Harbours holds a national Arrangement], and several municipalities (and others) have shown a high degree of interest in developing habitat banks].

The current VFPA/DFO agreement (to be renewed as an "Arrangement"), has been in place since 2012 and VFPA/DFO are meeting with PRRO because DFO is renewing the agreement with VFPA for continued use of the bank.

A comment was made that there were questions and concerns regarding the *Fisheries Act* during the *Fisheries Act* review process that were never addressed from an Indigenous perspective and that the feedback process was too fast. DFO explained that a number of Indigenous organizations and groups submitted similar submissions and that specifically related to the 'Section 6' factors there were a number of items recommended for change, including cumulative effects, consultation and use of a precautionary approach. As far as DFO is aware all of the recommendations have been considered for incorporation into the new Act. As well, there is likely to be a strong Indigenous voice as the current government is extremely interested in pushing the reconciliation agenda forward.

A comment was made regarding the amount of development within First Nation territory. The new federal protocol has language around engagement and is fairly general, but First Nations may have the capacity to properly engage on issues, and understand that there is a responsibility to move forward with the federal government. Specifically the LFFA is very entrenched in federal consultation. At the Tribal Council level, a cautious approach is being taken. It was noted that some work is being undertaken through the federal consultation network, specifically with Angela Stadel, Manager Consultations, Strategic Policy at DFO. There was general support to continue such actions. It was noted that DFO is expanding its consultation teams, but there is also concern regarding consultation fatigue.

### **DFO made a commitment to ensure that FPP staff are informed about the federal consultation network.**

There was some discussion regarding the status and timing of signatures for the Federal Protocol Agreement, which represents the first of this type of agreement in western Canada (as far as participants are aware). Funding is still being considered. There was subsequent discussion that the PRRO could assist DFO with informing First Nations of the legislative changes and regional organizational changes as these come about.

Discussion on the upcoming VFPA-DFO Arrangement centered on the term of the renewed agreement. VFPA advised that the former agreement was 5 for years and was extended by DFO over the last 2 years; it expires March 2019. VFPA has been working on process with DFO about what the new agreement looks like. The intent is to have a 10-15-year time frame and to execute the arrangement in Q1 2019. DFO also noted that the arrangement includes a 5-year agreement review clause.



## DRAFT MEETING NOTES

DFO confirmed that the other banking agreement renewal will very likely to occur after new Act comes into effect.

DFO added that there will be other points of engagement with First Nations when new policies are being contemplated. Once legislation changes, policies also have to be modified to reflect the changes. Discussion with Indigenous groups could pertain to regulations, for example, like that for the information requirements and timeline regulations put into force, or would be if habitat banking is contemplated as a new regulation. All proposed regulations require consultation. So, DFO is certain there will be continued be engagement and consultation on policies under a new Act.

A comment was made regarding input on the new policies, specific to productivity. DFO advised they are interested in any input, feedback and ideas about productivity and how it could be measured.

Additional meetings were suggested when the DFO-VFPA arrangement is in place, and there is further movement on the Federal Protocol Agreement. A workshop was also suggested.

Additional information was provided from First Nations that there are concerns regarding the health of and access to marine aquatic species, specifically clam beds, noting there has been cultural losses for communities like Semiahmoo. VFPA responded that there has been interest from Indigenous groups on VFPA hosting a clam bed workshop and this is something that is being considered for 2019.

VFPA was asked about their involvement in flood management, noting it is an unfunded process and is hard for First Nations to participate. VFPA's responded that their Environmental Programs Department is working on stormwater management and confirmed that VFPA HEP considers sea level rise in coastal engineering designs for each habitat project that VFPA undertakes. VFPA uses best available science and complies with, or exceeds, provincial guidelines. Habitat is built to be resilient with the elevation range species are able to survive at.

A past meeting with Port directors regarding navigation and a longer term plan around Harrison, related to a transfer station which had implications for fish and fish habitat was discussed. It was explained that First Nations have vision as Indigenous people, about what foreshore would look like, how water flows and comes back, river cycles, fish species seasonality, etc. A concern was raised that the current fisheries window is based on interior Nicola Thompson Coho but that interior Coho are entirely different from Lower Fraser Coho in run and spawning timing as well as incubation. Another concern raised was related to dredging near, or of, eulachon spawning grounds. PRRO/LLFA interests are to look after all the life forces in First Nations territory as well as meeting objectives that are based on cultural traditions.

Recommendations were made as follow up from the meeting:

- It was suggested VFPA consider the opportunity of funding and participating in the foreshore management symposium. From an Indigenous perspective, there is a high importance on the need for a long term foreshore management plan that would help resolve jurisdictional (municipal) challenges and provide solutions to managing the foreshore. It was also suggested VFPA and others tackle known issues such as flooding, water retention, navigation, dredging, and gravel removal. A like-mindedness document could come out of such a symposium.



## DRAFT MEETING NOTES

- The Fraser Watershed Restoration Initiative was mentioned as well. The initiative has involvement of a number of ENGOS. The need for assembling, for example a \$500M fund for the entire Fraser river watershed has been proposed – a very ambitious, far-reaching and exciting initiative that PRRO would support participation in.
- VFPA advised that there is a large scope of work the Habitat Enhancement Program/team is involved in and it includes a number of initiatives through their different departments.
- The People of the River conference was brought up as a two-day event that could provide opportunity to look at what people are doing in the territory. It was proposed that VFPA/DFO/PRRO could present to the communities and also hear what is going on in First Nations communities. A statement was made that often people take ITK and use it but don't report back to knowledge holders/community so the conference could represent a chance to bring it back to communities, full circle.

**Summary notes from the meeting were requested and VFPA/ DFO committed to providing high level summary notes to participants and interested First Nation organizations/ groups.**

### **Documents provided**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. DFO Presentation - Overview of Proponent-led Habitat Bank
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

### **Note taker**

Jemma Scoble

**From:** Lien, Meaghan on behalf of Scoble, Jemma  
**Sent:** Friday, January 11, 2019 3:24 PM  
**To:** Katherine Wheatley; Mark Guerin  
**Subject:** VFPA-DFO Habitat Banking Workshop - Draft Meeting Notes  
**Attachments:** 2018-09-11-VFPA-DFO\_AG Meeting Notes-Vancouver-DRAFT.pdf

**Categories:** Delta

Good afternoon Katherine and Mark,

Please find the attached draft meeting summary from the Habitat Enhancement Workshop held on September 11, 2018.

Do not hesitate to contact me if there are any questions or concerns.

Regards,

**Jemma Scoble**  
Aboriginal Consultation Support



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9000 | C: 778.822.7240  
[portvancouver.com](http://portvancouver.com)

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## VFPA-HEP & DFO Consultation with Aboriginal Groups on:









- VFPA-HEP's Consultation Process for Habitat Banking Projects (VFPA)
- Overview of Proponent-led Habitat Banking (DFO)

**Date:** Tuesday, September 11, 2018

**Time:** 9:00 a.m. to 1:30 p.m.

**Location:** Pacific A & B Rooms, Vancouver Fraser Port Authority, 100 The Pointe 999 Canada Place, Vancouver

### Participants:

	<i>Semiahmoo First Nation</i>	Jemma Scoble, VFPA
	<i>Semiahmoo First Nation</i>	Charlotte Olson, VFPA
	<i>Musqueam First Nation</i>	Gord Ruffo, VFPA
	<i>Musqueam First Nation</i>	 , Hemmera
	<i>Tsawwassen First Nation</i>	Byron Nutton, DFO
	<i>Kwikwetlem First Nation</i>	Suzanne Thorpe, DFO
	<i>Kwikwetlem First Nation</i>	Shona Smith, DFO

### Agenda:

#	Item	
1.	Introductions	
2.	VFPA Presentation	
	• Objectives of Information Session	
	• Overview of VFPA's Habitat Enhancement Program	
	• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects	
	• Project example: New Brighton Park Shoreline Habitat Restoration Project	
3.	DFO Presentation	
	• Requirements for Fisheries Act Authorizations	
	• Proponent-led habitat banking	
	• Habitat banking arrangements	s.19(1)
4.	Questions and General Discussion	

### Documents Provided:

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. Overview of Proponent-led Habitat Banking (DFO presentation)
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

## DRAFT MEETING NOTES

### Summary of Discussion:

VFPA provided context that the purpose of the meeting is to share and discuss, with Aboriginal groups, information related to the consultation processes used for the delivery of VFPA's habitat projects proposed for VFPA's habitat bank and to provide opportunity for Aboriginal group's input into this process. As well, DFO will provide information on their policies related to habitat banking and explain the habitat banking program.

#### <VFPA presentation>

During the VFPA presentation, there was discussion on an example project undertaken with support from First Nations. The Glenrose Tidal Marsh Project was a habitat project that was brought to VFPA from several Nations where ancestral sites were being exposed by erosion and artefacts were being lost/ looted. The opportunity to protect these ancestral sites was of great significance to those Nations. VFPA at looked at providing protections for the ancestral sites – as well as for fish – and prioritized this project because of its significance to the communities.

VFPA indicates that as part of the current engagement effort they are seeking advice on what projects should be considered and how First Nation communities want to work together. The identification of habitat project sites that are significant for the Nations HEP is working with is important. As well, in the project development phase the involvement of Nations in planting and construction opportunities are considered, and VFPA has made such opportunities a priority.

VFPA discussed other projects that VFPA-HEP has undertaken. With Musqueam First Nation (MIB) a project was initially focused on enhancing the foreshore area (on Musqueam lands in Vancouver) with a tidal marsh but feedback from Musqueam brought the focus to the need for a new boat ramp, which was rebuilt on the foreshore by VFPA. Musqueam advised that for this initiative the creation of a tidal marsh was not the main priority, but the boat ramp project was.

A question was asked about whether VFPA had to avoid the City of Vancouver's utilities (e.g., storm drain) in the area where the new wetland was created at New Brighton Park (NBP). VFPA confirmed that the west edge of the wetland had to be located to the east to accommodate the City of Vancouver's storm drain.

A request was made for information on the monitoring results and fish use of the NBP wetland area. VFPA responded that HEP has completed its 2018 annual post construction monitoring a few weeks ago and can share it when the reporting is completed, if there is interest. From a biological perspective, the results are very positive. The salt marsh is establishing well, recognizing it has only been one year and that it takes some time for the sites to establish and function. A Go-pro camera used to obtain underwater video footage at the marsh confirmed that juvenile salmon are now using the tidal channel. As well, some kelp has established in the new habitat.

First Nations asked if there was Aboriginal consultation completed by VFPA for NBP. VFPA responded that there was consultation with Musqueam, Squamish and Tsleil-Waututh First Nations among other Nations. Consultation was conducted to determine the best way to work with the Nations as well as on the technical and design options for the foreshore. Specifically, VFPA advised that Musqueam, Squamish and Tsleil-Waututh First Nations worked with VFPA's technical team on items such as hydraulic flushing, number of channel

## DRAFT MEETING NOTES

openings, etc. During the technical discussions the planting plan was reviewed to ensure that the plant selections were supported by the Nations involved.

A question was asked about whether or not the planting plan included any considerations for climate change. VFPA confirmed that climate change was considered and that monitoring is being done to determine the establishment of all species. The plants installed are comprised of native coastal species. Plant selection was based on appropriate native coastal species that are able to survive at different water elevations. This is meant to provide for the long-term survivorship of vegetation in the marsh area. The dune plants, for instance, are hearty and will thrive unless placed underwater. Generally, the plants are becoming well established, specifically pickleweed and arrowgrass.

Questions were asked about monitoring and how long monitoring is performed for. VFPA advised that monitoring is being undertaken on an annual basis up until habitat credits are proposed to be withdrawn from the bank or until any further requirements for monitoring by the agencies are concluded.

There was discussion regarding the Vancouver Park Board oversight at NBP. The Park Board has a role for maintaining the adjacent park area but the area of the wetland habitat is under VFPA jurisdiction, and is therefore maintained by VFPA-HEP. A concern was raised regarding the potential for site impacts due to Park Board activities (e.g., release of chlorinated water or other). VFPA advised that they work closely with the Park Board under a formal agreement which should, along with federal and provincial legislation and regulations, prevent impacts to the restored wetland.

First Nations advised that there is value in the planting of traditional foods for Katzie FN and for many other bands; these represent some of the valued trade goods. As well, there are educational opportunities in such areas that could be taken advantage of.

<Break>

### <DFO presentation>

A question was asked regarding what chemical/ biological manipulation is included in the context of offsetting. DFO responded that this could be something like herbicide treatment of invasive species or lake fertilization to promote primary and secondary production of fish that would in turn improve the survival of juvenile fish.

Additional note: To date, DFO has not considered chemical or biological manipulation for any habitat banking project. Its relevance in the context of habitat banking is limited and may not be appropriate for habitat banking credit allocation.

There was discussion regarding habitat banking. DFO provided information on habitat banking including that:

- There are examples of habitat banking from the early nineties so habitat banking precedence is well established.
- Habitat banks are used Canada-wide and they have been used in BC as a practice for many years for offsetting environmental impacts.
- Site surveys and monitoring is completed to ensure performance is met; at the time of withdrawal the site is reviewed in consideration of its applicability to an Authorization and relevant offsetting requirements.
- With regard to the use of ratios used to calculate the scale of offset for certain components of the Authorized work, undertaking or activity, the use of ratios

## DRAFT MEETING NOTES

depends on what the habitat values are and the type of project impacts for determining ratios. Under Authorization where there is no habitat bank available, reasons to use ratios includes the uncertainty with offsetting as well as the time lag it takes for offsetting projects to become productive. Conventional offsetting creates an impact today and the offset becomes functional at a later date. There are different reasons to use ratios with size of impact versus the size of the offset. Sometimes, when there is uncertainty that offsetting will work, a proponent may build more of it with the intent that most will work; this is then monitored over a period of time.

- There is not a standard "across the board" ratio used. Ratios are determined on a project-by-project basis and it is by habitat type that is being impacted, as well as habitat type being proposed for offsetting. For example, it's easy to understand the currency exchange between eelgrass to eelgrass but it is more difficult to understand the exchange between mudflat to eelgrass.
- A ledger documenting habitat types is useful in making decisions with offsetting measures but there is no magical formula. There is a lot of biology, a lot of formulas and site specifics in each case, related to productivity values.
- There is no across the board type ratio. Offsetting is based on a certain amount of professional judgement by each assessor, DFOs management and the information provided by the Proponent.

A comment was made regarding the Roberts Bank area, where there was log/wood debris removal, trying to offset the loss of the aquatic component. DFO added that based on what you're trying to achieve and the site specifics, you might have to adapt plans (through pre-project planning and assessment) and see what the right offset is for the right impact, takes a lot of the guess work out of it.

DFO advised that with the 2012 changes to the *Fisheries Act*, one of the policies that was formalized was the offsetting policy, and later an interim policy for habitat banking was brought forward. One of the recent proposed changes to the *Fisheries Act* is that it may now include habitat banking within the Act itself. DFO may do more of this type of work with upcoming changes to the *Fisheries Act*. It's hard to know in terms of legislation but we are fairly sure that there will be more formalized work in support of habitat banking.

A request was made for DFO to provide examples of where habitat banking was not considered sufficient by either the regulator or Aboriginal group. A follow up question was asked on what occurs when there is a disagreement in sufficiency. DFO advised that it has happened (no specific file details available) but that generally if a proposal comes up and it's not enough to provide fulsome offsetting and/ or is not adequate for the offset, more of a withdrawal may be needed from a proponent's habitat bank.

VFPA was asked if they are planning to use any of their habitat credits. VFPA responded that they currently do not have any withdrawals proposed from the habitat bank but, they may propose to do so in the future.

A statement was made regarding appreciation for habitat enhancement and that with fish and fish habitat losses, there may be a real need for this type of approach to secure areas for the future.

Clarity and confirmation was sought regarding a concern with habitat banking - that there is no guarantee that future projects will be approved, that certain types of impacts will be considered on their own and not necessarily be approved just because there is a habitat

## DRAFT MEETING NOTES

bank to offset them. DFO confirms this and advises that proponents of infrastructure projects must be able to demonstrate the projects impacts are unavoidable, and how these impacts will be offset. Consideration may be given to the use of credits as offsetting but it does not affect the decision. The existence of a habitat bank is not a deciding factor on whether or not to issue an Authorization. As well, before DFO makes any regulatory decision, DFO is required to consult with First Nations.

There was ensuing discussion regarding DFO's decision making processes and whether DFO's program is well-resourced and/or whether changes to the *Fisheries Act* are likely to affect resources. DFO does not have specific information pertaining to resourcing per se, but expects that the resources dedicated to habitat banking are unlikely to change.

The goals of the information session were reconfirmed as:

- DFO: Information sharing on the existing DFO-VFPA habitat banking agreement and proposed new arrangement with VFPA as the current agreement is expiring shortly. The goal was to provide information on what habitat banking is and the associated policies that provide for its use.
- VFPA: HEP has been working with many communities in the delivery of its projects. The goal was to provide opportunity to share the process VFPA has been using and request input as to whether there are any concerns with the process or ideas to improve processes.
- VFPA is interested in identifying ideas and projects from First Nation communities. VFPA feels that it is an opportunity get feedback in order to improve or enhance projects and it is intended to be an ongoing communication.

A commitment was made by VFPA and DFO to share a summary record of the discussions and to provide these to the attendees for review and feedback.

<End of Session>

**From:** Lien, Meaghan on behalf of Scoble, Jemma  
**Sent:** Friday, January 11, 2019 3:37 PM  
**To:** Natalie Anderson (Cowichan Tribes)  
**Subject:** VFPA-DFO Habitat Banking Workshop - Draft Meeting Notes  
**Attachments:** 2018-10-16-VFPA-DFO\_AG Meeting Notes-BrentwoodBay-DRAFT.pdf

**Categories:** Delta

Good afternoon Natalie,

Please find the attached draft meeting summary from the Habitat Enhancement Workshop held on October 16, 2018.

Do not hesitate to contact me if there are any questions or concerns.

Regards,

**Jemma Scoble**  
Aboriginal Consultation Support



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9000 | C: 778.822.7240  
[portvancouver.com](http://portvancouver.com)

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## VFPA-HEP & DFO Consultation with Aboriginal Groups on:

- VFPA-HEP's Consultation Process for Habitat Banking Projects (VFPA)
- Overview of Proponent-led Habitat Banking (DFO)

**Date: Tuesday, October 16, 2018**

**Time:** 9:00 a.m. to 1:30 p.m.

**Location:** Brentwood Bay Resort, Brentwood Bay

## Participants:

[REDACTED] Tsartlip First Nation	Jemma Scoble, VFPA
[REDACTED] Tsartlip First Nation	Sinead Deery, VFPA
[REDACTED], Tsartlip First Nation	Charlotte Olson, VFPA
[REDACTED] Lyackson First Nation	Gord Ruffo, VFPA
[REDACTED] Tsawout First Nation	[REDACTED] Hemmera
[REDACTED], Penelakut Tribe	
[REDACTED], Cowichan Tribes	Byron Nutton, DFO
[REDACTED], Lake Cowichan First Nation	Suzanne Thorpe, DFO
	Shona Smith, DFO

## Agenda:

#	Item
1.	Introductions
2.	VFPA Presentation <ul style="list-style-type: none"><li>• Objectives of Information Session</li><li>• Overview of VFPA's Habitat Enhancement Program</li><li>• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li><li>• Project example: New Brighton Park Shoreline Habitat Restoration Project</li></ul>
3.	DFO Presentation <ul style="list-style-type: none"><li>• Requirements for Fisheries Act Authorizations</li><li>• Proponent-led habitat banking</li><li>• Habitat banking arrangements</li></ul>
4.	Questions and General Discussion

## Documents Provided:

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. Overview of Proponent-led Habitat Banking (DFO presentation)
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

## DRAFT MEETING NOTES

### Summary of Discussions:

An overview of the Habitat Enhancement Program was provided by VFPA. VFPA has had a banking agreement with DFO for the last 5 years and the purpose of the meeting is its renewal.

#### <VFPA presentation>

A question was asked regarding the word "balance" and what that means to VFPA; whether the port intends to incorporate previous development into finding balance? Clarity was also sought about measuring such balance between infrastructure today and providing a healthy environment, specifically referring to measuring thresholds and confirming "balance". VFPA responded that they generally focused on improving areas that were previously affected (e.g., log debris from booms) and that they consider past/future development and opportunities to restore previously affected areas in order to try to balance impacts from development.

A question was asked about the types of partnerships that VFPA forms with organizations, aside from the habitat banking partnership with DFO. VFPA responded that they have many partnerships and they actively look for opportunities to partner with others. As an example, VFPA partnered to work with Pacific Salmon Foundation (PSF) by providing funding related to research on eulachon on the Fraser.

Comments were made regarding municipal projects, and the level of authority that VFPA and DFO have over such projects when First Nations have concerns about them. VFPA indicated that they try to align with municipalities, when possible but that there are often other factors and priorities that are taken into consideration. DFO advised that they don't have authority over municipalities per se, but that when there is opportunity for habitat restoration, that there is effort to try to link and resolve interests between parties.

Concerns were raised regarding local government allowing effects on habitat due to development, and a desire for DFO to address it. DFO responded that with the new changes to the *Fisheries Act*, there would be opportunity to be (re)involved in integrated planning processes, rather than just considering serious harm to fish, which is a reactive and legislative approach. DFO encouraged engagement on the *Fisheries Act* review.

Additional note: many municipalities have their own environmental departments and by-laws and regulations to support environmental protection within their land boundaries. DFO reviews municipal projects that are likely to result in serious harm to fish or fish habitat but these only account for a small percentage of projects that are undertaken. The province of BC also has regulations that may pertain to municipal projects.

Advice was given to VFPA and DFO that project monitoring (data and results) is of interest to First Nations, as well as determining what obstacles are needed to be overcome to enable a restoration project (e.g., dealing with geese predation at Glenrose). It was also indicated that project monitoring needs to be reported with context of the long term benefits and indicator targets (e.g., reports of fish). VFPA agreed and indicated that post construction updates and reporting is important and advised that this information is shared with interested First Nations. VFPA advised they will continue to improve on the reporting and sharing information.

Concerns were raised regarding monitoring undertaken on restoration projects. There is a need to understand what monitoring is being undertaken and for what purposes.

There was broad discussion about the quantitative analysis and qualitative analysis undertaken to support VFPAs restoration projects. VFPA indicated that monitoring results

## DRAFT MEETING NOTES

reports are prepared each year and that measures are taken to accelerate the recovery of habitat and prevent any impacts to restored habitats. To date, VFPA's monitoring has largely been based on standard methodologies and generally, plant-based indicators (e.g. percent vegetation coverage). VFPA advised that there is opportunity to modify the program in place and consider other targets and factors as the program develops. DFO indicated that the habitat program is proponent-led so the indicators and measures are generally proposed by the proponents for acceptance by DFO, and that proponents are responsible to show restoration success prior to the project being accepted for use in a habitat bank as credit. A specific comment was made regarding the importance of the density of eelgrass and its role as an ecosystem health indicator. It was suggested that the indicators should be based on a healthy ecosystem approach, rather than comparison to a reference site that may not be functioning to maximum capacity as a healthy ecosystem/good indicator.

Concerns were raised regarding project placement (location) and the surrounding conditions (e.g., water quality issues). There was discussion about the choice and establishment of projects, and ensuring projects are located where there is a strong likelihood of success and/or in addressing habitat that is lacking in certain areas, or other limiting factors. As well, VFPA and other agencies consider project benchmarks. This relies on investigation and studies to inform project feasibility. VFPA advised that there is a fundamental basis of scientific research needed and a high degree of comfort that the background work and engineering is sound, as it guides what projects are technically feasible.

Concerns were raised about shellfish closures, contamination and the use of water for cultural reasons, as well as concerns about levels of bacteria and its resulting effects on people. Dredging and industrial development concerns were also raised.

The importance of indicator species (crab, sea urchin) to First Nations was brought forward, as well as the need to ensure sustainable food-based ecosystems to support First Nations food fisheries and rights to harvest. The water being "alive" is an important concept.

Concerns were also raised regarding industries that cause impacts and those industries not having a role to restore/ rehabilitate the areas used. VFPA acknowledged this, but also indicated that they can only address areas within which the port has administration. VFPA discussed the positive merits of working in partnership for restoration projects and advised about how they are trying to set positive examples of successful projects with municipal and public support that other industries can consider in their restoration efforts (e.g., New Brighton Park). VFPA discussed the projects developed on port land and advised that studies are completed to ensure that impacts are avoided as best as possible. VFPA noted that the new projects do not address past effects, per se, but moving forward through the Habitat Enhancement Program they are ensuring that any new impacts are fully mitigated and/ or offset. DFO advised that with regard to past impacts, that the federal government has salmon enhancement funding opportunities available and that the new proposed legislation and upcoming funding opportunities may result in an increased mandate for undertaking additional restorative work (by DFO).

A concern was raised about a project severely impacting Tsartlip's estuary, where eelgrass and fish passage across a dam were/are purportedly affected by stream restoration works. First Nations expressed that those proponents with funding should have some level of responsibility for these types of projects.

VFPA indicated that their main source of funding is from capital infrastructure at the port and that they are building habitat in advance of port development.

There was discussion on the willingness and capability of VFPA to complete offsets/ habitat banking outside of the Lower Mainland and VFPA indicated that they would be open to

## DRAFT MEETING NOTES

consideration of projects within their service area, and on Vancouver Island. First Nations would like to have some projects considered near the Nanaimo River estuary and in the Fraser River (specific to the South Arm). Further engagement will be needed to flesh out potential considerations and understand what projects First Nations would recommend. VFPA advised that they are considering opportunity for a large proposed project referred to as the proposed "South Arm Jetty Tidal Marsh Project", which may have potential restoration opportunity over 30-40ha.

First Nations requested review of project ideas and recommendations that are not currently listed by VFPA, and broadly indicated support for restoration projects in general. There is a desire by Indigenous groups on Vancouver Island to specifically consider proposals for projects on the Fraser River. Concerns were also raised about log storage/ removal, dyking. VFPA advised that they have discussed dyking issues with some municipalities and are considering if there may be opportunities to protect/ enhance habitat, as well as consider implications due to sea level rise.

First Nations discussed the challenges in bringing forward discussion on First Nations history and way of life. Their history dates far back and their legacy defined through stories about how people would travel up the Fraser and camp; and this includes stories of how fish were bought from First Nations right off their boats, and of women roasting ducks harvested from local marshland areas. First Nations want people to know that sea asparagus is edible and that it provides habitat. The interconnectedness of species and habitat is important and has purpose; there are food web linkages, for example, from barnacles to other animals. A high importance is placed on teaching and legacy. There is a desire for certain kinds of "legacy projects", to teach others and leave a legacy for young people via engagement in these projects – through pictures and through understanding their culture and history.

<Break>

VFPA discussed the involvement of First Nations in projects and the consultation process undertaken to identify priorities (e.g., for New Brighton: ecological signage including traditional knowledge for education, cultural recognition).

VFPA also discussed the need for maintenance and monitoring when habitat is built.

There was an inquiry about accounting for climate change and VFPA advised that it is addressed in the design phase, especially since most of their habitat restoration is located in areas having coastal/tidal influence. A follow up inquiry was asked about the protection of restoration habitat(s) after they are established. VFPA responded that the restoration areas are designated conservation under VFPA's land use plan. There are protections in place overall for fish habitat, per the BC *Fish Protection Act* and the federal *Fisheries Act*.

<DFO presentation> "Overview of Proponent-Led Habitat Banking"

DFO advises that they will be presenting information on the policy that supports the habitat banking policy as per current legislation. DFO noted that the *Fisheries Act* review and possible amendments are in progress through Parliament but that while the language of the Act may change, the general principles of protecting fish habitat are unlikely to change and there is still expected to be habitat banking defined in the Act.

A comment was made that when referring to guiding principles (#1) that they seem to be supportive of commercial fishery. Questions were asked regarding "Where do First Nations priorities fit in here? What are the local restoration priorities?" A recommendation was made that there should be a separate guiding principle to offset in a way that supports First Nations cultural values. DFO clarified that the guiding principle (#1) includes First Nations fisheries, and is not meant to preclude any type of fisheries.

## DRAFT MEETING NOTES

A follow up question was asked regarding guiding principle #2 regarding how offsetting measures would "balance" project impacts and what that means. DFO responded by clarifying that the guiding principles are national principles specific to the offsetting guidance and process. If DFO contemplates issuing an Authorization for serious harm to fish, there is counterbalancing/offsetting of that harm. There was some discussion regarding the process of effects assessment, residual impacts and offsetting those residual impacts, noting that site specific assessments are undertaken to try to understand impacts and offset them.

A question was asked about whether or not DFO works with First Nations directly to understand the impacts? DFO confirmed they do work with First Nations to understand impacts and noted there are 2 parts to habitat banking: i) building habitat prior to building projects requiring offsetting and, ii) issuing of an Authorization from DFO for an impact. There is engagement and consultation on all of these aspects.

A question was raised on whether or not New Brighton Park was offsetting a specific development. DFO responded that that New Brighton was not an offset for a specific development but that habitat banking means you are building the offset up front. At some point down the road, there might be a development that causes an impact and VFPA would apply to use the bank if applicable to their project. Habitat banking is not a typical approach where you build habitat to offset a specific project (e.g. at the same time).

There was discussion regarding use of the term "*conservation project*" in reference to habitat banking. DFO noted that it is a term used in the policy document to distinguish between a habitat development project and an offsetting project. First Nations noted that there may be concerns with the term because Aboriginal rights can be set aside in favour of conservation; they feel the reference needs to be changed. New Brighton Park shouldn't be considered a conservation project; rather it should be described as a habitat enhancement project. This is important in relation to Aboriginal rights and title interests. There is also strong concern that a proponent may unduly sway the Crown in terms of habitat banking project use. The concern is that proponents have a "bank" they can automatically draw from, with construction down the road. DFO noted the terminology concern and also advised that *Fisheries Act* may change; however, the new Act is likely to be supportive of habitat banking. The information we have is that the proposed Act is likely to take elements of the policy and bring it into the new *Fisheries Act* on a more formal basis as a way to deal with offsetting.

Concerns were raised regarding the overall concept of habitat banking and that it could be used to unduly sway the Crown to grant an Authorization (if habitat is already banked).

A general concern was also raised by First Nations regarding a need for addressing dyking on the South Arm of the Fraser River at a strategic/ innovative level. First Nations are very connected to this land, and its water and resources; as well, it affects several aboriginal fisheries. There is a need for DFO to help to deal with fisheries issues in the area. DFO noted the concern and committed to bring this up to other sectors in the Department. DFO advised that efforts are being made to try to balance benefits of habitat banking (i.e., doing things up front) to make sure that down the road, when it is being used to offset, there is a really clear understanding of the specific benefits of the banking project to balance the impacts of the project. It was further noted that having a habitat bank doesn't guarantee that you will receive an Authorization as the impacts would be evaluated separately from the offsetting.

Concern was raised that DFO doesn't say "no" to projects. Examples of projects where DFO has not granted an Authorization were briefly discussed (e.g., Fish Lake (Taseko)). DFO explained that even if an Authorization isn't denied, proponents often 'cut their losses' earlier in the review process, so a project review doesn't often conclude by 'denying' an

## DRAFT MEETING NOTES

Authorization. Such projects are often rescinded by proponents then sometimes resubmitted after having been relocated or revised. Regulatory staff review the projects and apply standard mitigation measures to avoid impacts. There is reliance on consultants, as qualified professionals, to design a project to avoid/mitigate impacts to fish and fish habitat.

Under the new *Fisheries Act*, a public registry of projects is proposed.

Concerns were noted regarding Atlantic fish farms.

Additional habitat bank concerns were raised about the projects being discussed being tied to specific locations - that DFO was requesting acceptance of impacts in relation to those projects at this time.

Additional note: DFO is not undertaking any projects-specific consultations to exercise any legislative authority under the Act at this time. The intent of this meeting was to discuss the VFPA-DFO arrangement that may enable future habitat projects, and determine how First Nations would like to engage on habitat banking.

DFO clarified that consultation will be completed when the impact is proposed and that consultation for a *Fisheries Act* Authorization is required when DFO contemplates a decision under the Act. This is what the Fisheries Protection Program does. DFO consults on the impacts being proposed and on whether all the avoidance/mitigation measures have been applied, and what should be done to offset impacts. Although there is some uncertainty around offsetting (i.e., is it functioning or not?), the intention of habitat banking is that there is benefit from having certainty of whether the habitat is functioning and productive.

There was discussion on habitat creation; land-based vs habitat created in the ocean. DFO indicated that habitat creation is somewhat different than restoration. Restoration is the rehabilitation of something which was previously fish habitat that may have been lost, whereas habitat creation is about creating something new. The intention of habitat banking is to create and improve net benefits to fish.

There is a strong desire from First Nations to be brought in early to discuss habitat banking at the forefront when habitat banking is being planned, not just when there is a project requiring consultation. With regard to "habitat" it needs to be recognized that you can't create habitat, you can only change habitat and that you are displacing something to create habitat, whether or not it is land-based and that, too, needs to be accounted for. There were questions regarding when consultation effort was undertaken by DFO in regards to habitat banking. DFO confirmed that the federal legal consultation requirement is as part of a permitting authority.

There was some discussion on what this means. DFO advised that if there is no serious harm to fish that proponents would not need Authorization - prior to building some types of habitat banking projects (i.e., if the project was land-based). For New Brighton Park, VFPA excavated historically placed fill, that had been placed to build an upland park. The park wasn't providing a benefit to fish, now it is. It did not require a *Fisheries Act* Authorization.

Concern was expressed regarding this approach to habitat banking and the need for Authorization for the New Brighton Park project as it is attached to a major water source. From a First Nations perspective, the area is occupied and used and consultation is needed when making those changes.

There was discussion on consultation. Concerns were expressed that the Nations present aren't being sufficiently consulted. It was expressed that Aboriginal rights and title (under the Douglas Treaty) are perpetual and that the First Nations need to preserve their relationship with the Crown and ensure they do not fetter those rights. Habitat banking should be viewed under a full-spectrum lens to ensure consultation is fulsome and adequate.



## DRAFT MEETING NOTES

DFO noted that while habitat banking in concept isn't new, that the point of meeting now is to advise that the Port has a habitat bank, that the DFO-VFPA habitat bank agreement is being renewed and as well, to receive input on VFPA's consultation process related to their habitat banking projects. It is not intended this to be consultation on the overall system of habitat banking, although those concerns will be noted.

Participants advised that they haven't been included in previous conversations on habitat banking with DFO and that in light of reconciliation, First Nations communities should be included in all decision making relevant to their lands, waters, resources including those regarding habitat banking. Habitat banking needs to be discussed at the point that projects are being initiated. First Nations expressed their desire to be involved in decision-making and in setting goals together for habitat banking that are acceptable to First Nations. Traditional knowledge should be considered, with the end goal of consumption in mind.

VFPA responded that they will discuss the development of objective measures and the incorporation of First Nations into project planning and project development. They advised that the projects recently completed were improved due to working with First Nations from the beginning. VFPA advised that they want to know how to implement this and work with Nations and determine what that looks like [for each Nation]. The proposed process presented is a starting point, and VFPA is seeking advice on defining and creating the path forward.

VFPA and DFO acknowledged that there may be a need for further discussions on habitat banking projects. These discussions are on the current proposed arrangement between VFPA and DFO, which is a high level arrangement that isn't specific to projects at the ground level. The arrangement itself is about how to manage, build and deliver on habitat banking projects. Processes for seeking input on projects and gaining input are not concluded, and this approach is to gather input from the beginning to inform later stages and determine how Nations wish to be engaged/ consulted.

First Nations consider it a significant issue that they feel they are forced into a pre-approval, pre-consultation environment for habitat banking - not specifically in relation to VFPA but in general. There is a strong desire to understand what all of the projects are, what projects will be proposed or put forward ahead of others and why. The process is as important as the outcome decisions for habitat banking projects and this is very important.

There was discussion on the Douglas Treaty as First Nations advised that the Douglas Treaty has never been recognized by DFO. There is concern that it has not been acknowledged but that DFO wants their consideration for habitat banking. Sentiment was expressed that habitat banking is a way out of infringement and that DFO is justifying infringement on Aboriginal and treaty rights - should call it an "infringement bank". There is a strong desire across all levels of government for meaningful engagement.

VFPA and DFO committed to follow up with attendees and provision of summary notes. Consideration will be given to a follow up meeting should attendees wish to have further discussion regarding issues that were brought up, and on the processes and proposed DFO-VFPA habitat banking arrangement.

**From:** Olson, Charlotte  
**To:** Ruffo, Gord; Nutton, Byron; Thorpe, Suzanne  
**Cc:** Scoble, Jemma  
**Subject:** RE: DFO Call w VFPA this Thursday and actions reminder  
**Date:** 2019-January-21 3:19:44 PM  
**Attachments:** image001.png  
2019-01-04-03-600-VFPA-HEP-DFO Meeting Actions-Rev1.docx

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Hi All, per Gord's note below

Friendly reminder that VFPA is looking for the following as soon as DFO can provide:

1. DFO content for final AG summary report (requested by Jan 18)
2. DFO written comments/edits on August 2018 draft Arrangement (requested by Jan 18)

As discussed in early January, we will speak to the status of these items at our upcoming call this Thursday Jan 24<sup>th</sup> (10am – conference call).

I have re-attached the actions list from our Jan 4<sup>th</sup> call, red text shows updates on relevant items.

We are looking to stay on track with the timelines that we agreed to work toward.

Thanks all,

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

**From:** Ruffo, Gord  
**Sent:** Friday, January 18, 2019 2:43 PM  
**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Cc:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Subject:** DFO input into the Summary Report

Hi Byron and Suzanne

We are working to finalize the Summary Report for your review and require your material. Are you on track to provide this to us this week?

**Gord Ruffo P.Eng.**  
Senior Project Manager  
Habitat Enhancement Program



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9018 | CELL: 604.202.8022



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**Pages 1582 to / à 1583  
are duplicates of  
sont des duplicatas des  
pages 1399 to / à 1400**

**Hwang, Jason**

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**From:** Assier, Gilles <Gilles.Assier@portvancouver.com>  
**Sent:** January-22-19 2:50 PM  
**To:** Magnan, Alain; Hwang, Jason  
**Cc:** Assier, Gilles  
**Subject:** VFPA - Centerm/HEP

Hi Al and Jason,



Al and I had discussed to have a meeting together with my team in February for DFO to discuss the changes currently being implemented in your teams. I met with Brad Fanos in his new position a week ago and he mentioned we should all get together later on in March once the FAA and associated regulations are close to be finalized, so that we can discuss those together and explore some further collaboration. I therefore think that we could wait for the March meeting and merge the purpose of the February one together.

I will reach out to you and Brad mid-February to set-up the March meeting.

In the meantime thank you to your respective team for your continuous help with the Centerm and habitat enhancement projects.

Thanks,

Gilles  
Office/Cell: 604-665-9078

s.19(1)

# **HABITAT BANK ARRANGEMENT: PORT OF VANCOUVER HABITAT BANK**

## **SUMMARY OF INDIGENOUS ENGAGEMENT ON VFPA AND DFO'S HABITAT BANK ARRANGEMENT**

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### Table of Contents

1.	Overview and Purpose .....	3
2.	Indigenous Groups within VFPA's Operational Area .....	3
3.	Engagement Activities .....	5
	<i>3.1 Information Packages</i> .....	6
	<i>3.2 Information Sessions</i> .....	6
	<i>3.3 One-on-One meetings</i> .....	7
4.	Attendance Records for Information Sessions .....	7
5.	Presentation & Other Material .....	8
6.	Concerns, Issues and Input Received .....	9
7.	Next steps for VFPA .....	12
8.	Next Steps for DFO .....	13
<b>Appendices .....</b>		<b>14</b>

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### **1. Overview and Purpose**

Vancouver Fraser Port Authority (VFPA) currently operates a habitat bank that was created through a formal agreement with Fisheries and Oceans Canada (DFO). This agreement will expire in March 31, 2019 and prior to entering into a new long-term habitat bank agreement, DFO has required that outreach be undertaken to:

- Ensure that Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program; and
- Ensure Indigenous groups are provided information regarding the habitat banking agreement.

This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements.

### **2. Indigenous Groups within VFPA's Operational Area**

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement, regular communication and to ensure that the protection of fish and fish habitat is considered in the development of the Asia-Pacific Gateway.

Vancouver Fraser Port Authority operates within the asserted traditional territories of 37 Coast Salish Indigenous groups and in proximity to the treaty settlement lands of the Tsawwassen First Nation (see Figure 1 below)



Figure 1

The following Indigenous groups' asserted traditional territories or treaty lands intersect with the lands and waters managed by VFPA:

- Musqueam Indian Band
- Squamish Nation
- Tsleil-Waututh Nation
- Tsawwassen First Nation
- Kwikwetlem First Nation
- Katzie First Nation
- Semiahmoo First Nation
- Qayqayt First Nation
- Hwlitsum
- Hul'qumi'num Treaty Group
  - Cowichan Tribes
  - Lake Cowichan First Nation
  - Penelakut Tribe
  - Halalt First Nation
  - Stz'uminus First Nation

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Lyackson First Nation
- Sto:lo Nation
  - Aitchelitz First Nation
  - Leq'a:mel First Nation
  - Matsqui First Nation
  - Popkum First Nation
  - Shxwha:y Village First Nation
  - Skawahlook First Nation
- Sto:lo Tribal Council
  - Chawathil First Nation
  - Cheam First Nation
  - Kwantlen First Nation
  - Kwaw-kwaw-Apilt First Nation
  - Scowlitz First Nation
  - Seabird Island First Nation
  - Shxw'ow'hamel First Nation
  - Skowkale First Nation
  - Soowahlie First Nation
  - Squiala First Nation
  - Sumas First Nation
  - Tzeachten First Nation
  - Yakweakwioose First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### 3. Engagement Activities

The following activities were undertaken:

- Sharing of Information Packages and letter
- Facilitation of Information Sessions
- Offers of One-on-One Meetings



## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### 3.1 Information Packages

Information packages were shared with the Indigenous groups identified in Section 2.

These packages included:

- A description of how habitat banks are used to offset serious harm to fisheries.
- A description of how habitat credits are deposited into the habitat bank.
- A description of how habitat credits may be withdrawn from the habitat bank and the DFO-led Indigenous consultation process associated with this withdrawal.
- An overview of VFPA's Aboriginal Consultation and Engagement Process for proposed habitat banking projects. This process demonstrates how VFPA intends to engage and consult with Indigenous groups within the identified service area and identifies how Indigenous input and knowledge will be considered throughout the project identification, development, construction and post-construction phases. Opportunities for Indigenous c (e.g. technical design review, fieldwork, monitoring, contracting, employment and training) will also be identified as well as the process for reporting back to Indigenous groups on feedback received.
- Other relevant materials (e.g. Habitat Enhancement Program presentations, project overview/information sheets, map of Habitat Enhancement Program projects, etc.).

VFPA sought to confirm receipt of this information by Indigenous groups through follow up communications. VFPA provided responses to any questions, comments and feedback from Indigenous groups received in advanced of focused information sessions.

### 3.2 Information Sessions

Three information sessions (Lower Mainland, Vancouver Island and Fraser Valley) were arranged to provide an accessible location for participants that required minimal travel. A proposed agenda was provided in advance of these sessions for review by participants. Key components of these information sessions were as follows:

- Presentation of material included in the Information Packages
- Attendance and support from DFO regional staff
- Questions/feedback from Indigenous groups

The schedule for these Information sessions was as follows:

DATE	LOCATION/VENUE
<u>Information Session No.1</u> September 11, 2018	Vancouver, BC VFPA Office
<u>Information Session No.2</u> October 16, 2018	Brentwood Bay, BC Brentwood Bay Resort
<u>Information Session No.3</u> November 29, 2018	Chilliwack, BC People of the River Referrals Office

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### 3.3 One-on-One meetings

One-on-one meetings or other types of engagement activities (e.g. presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. TWN advised VFPA that they would not participate in the VFPA/DFO engagement regarding the HEP and banking agreement as they are already engaged in discussions with VFPA and DFO regarding administration of VFPA's habitat bank. No other requests for meetings, additional information or feedback have been received to date.

## 4. Attendance Records for Information Sessions

### Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	
Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

### Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo Sinead Deery
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	

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## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

### Information Session No. 3 – Chilliwack, BC (November 29, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	
Lower Fraser Fisheries Alliance	

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## 5. Presentation & Other Material

Presentation and other materials shared during the VFPA/DFO engagement included the following:

- Package of information and accompanying letter (August 2018)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a Fisheries Act Authorization
  - Proponent-led Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

### **6. Concerns, Issues and Input Received**

Several key topics were raised during this engagement process. Feedback included the following:

#### **VFPA-DFO Habitat Banking Arrangement:**

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation.
- Importance of ensuring that constructed project sites are protected into the future.
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required.

#### **Habitat Banking (specifically):**

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects.
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact.

#### **VFPA/HEP Engagement Processes:**

- General comment that the HEP consultation is understood and has been effective.
- General support for projects built to date and consultation process undertaken by VFPA.
- Desire for Indigenous involvement in all aspects and phases of HEP projects: provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- Interest in providing input into what is monitored (i.e. testing taste and quality of fish for consumption rather than just fish presence and health).

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Sharing of information: collection data, monitoring data, fish use data, construction monitoring reports. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.). There is value in making information available.
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Suggestion to work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

### **DFO Aboriginal Consultation and Regulatory Processes:**

- General consultation concerns: adequacy of consultation at all levels of First Nations governance (for all aspects of habitat banking, including the policy itself). Suggestion that DFO consult at a higher level at First Nations' organizations.
- Concerns that DFO consultation is completed on a project by project basis – one project at a time when Authorization is sought. Importance of First Nations being informed of projects that do not get an Authorization due to impacts.
- Concern that the Crown is swayed to grant Authorizations if habitat is already banked.
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights.
- Guiding principles for offsetting should include that offsetting be done to also support First Nations cultural values.
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries.
- General perspective that habitat is not “created” but only restored; something must be displaced to create new habitat.
- There is perception that DFO approves all authorizations.
- Comment that there is a need to use Western science and Traditional Knowledge in the monitoring and evaluation of projects.
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm.
- Comment that First Nations do not feel properly consulted by DFO.

### **General, Scientific, Technical and Cultural:**

- Request for projects to be built on the South Arm of the Fraser River and Vancouver Island.
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dying system design with benefits to fish).

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Consideration of climate change, sea level rise and flood management in project planning.
- General interest in shellfish restoration & other food-harvest value species.
- Cultural considerations are important: intertwine legacy and cultural history into projects.
- Cultural loss of marine aquatic species (clam beds).
- Development of educational resources, including First Nations specific educational aspects and opportunities (important species, cultural history).
- Need for balance: infrastructure development and healthy environment.
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat that VFPA is enhancing.

### **General state of the environment:**

- Concern regarding the inability to compensate for historic impacts / damage / destruction of environment – lack of industry accountability for historic damages / destruction of habitat.
- Need for balance of infrastructure development and the environment.
- Concern regarding the impacts of dyking on the lower Fraser River.
- Concern regarding the impacts of fish farms.
- Importance needs to be placed on protecting native species.
- Access to and health of marine aquatic species (clam beds) for First Nations.

### **Other:**

- *Fisheries Act* review comments not adequately addressed from an Indigenous perspective; comment that the review processes was too short.
- Importance of long-term foreshore management planning and VFPA support of this work and other initiatives.
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive.
- Concern with “Indigenous engagement” being at the end of DFO’s slide deck.

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### 7. Next steps for VFPA

As previously noted, the objectives of the DFO/VFPA engagement process were to ensure that Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program; and to ensure Indigenous groups are provided information regarding the DFO-VFPA habitat banking agreement.

In response to Indigenous groups' feedback on the engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program, VFPA will:

- Review the Habitat Enhancement Program consultation process in light of feedback received to consider opportunities to improve its effectiveness, for example:
  - Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including, provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
  - Consider opportunities and a process for enhanced integration of Indigenous input and priorities into planning for monitoring (i.e. testing taste and quality of fish for consumption rather than just fish presence and health).
  - Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, work happening by other organizations (Indigenous, NGO, governments, etc.).
  - Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.
- Identify opportunities to integrate feedback, priorities and ideas raised by Aboriginal groups during engagement, for example:
  - Consider producing cultural/educational materials for projects and the Habitat Enhancement Program
  - Working with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
  - Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
  - Consider opportunities (i.e. workshops and initiatives) related in shellfish restoration & other food-harvest value species.
  - Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Consider opportunities for DNA analysis be undertaken on stocks of fish for foreshore habitat that VFPA is enhancing.
- Report out to Aboriginal groups on any changes from the review of the consultation process resulting from the engagement process and feedback shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement, VFPA will:
  - Share this report, along with copies of the habitat banking-related information presented during the engagement process.
  - Notify Indigenous groups when a new DFO-VFPA habitat banking agreement is in place.
  - Respond to any future questions or requests for information related to the DFO-VFPA habitat banking agreement.

The Habitat Enhancement Program has ongoing engagement and consultation which allows for continued opportunities to address any concern or issues, to work with Aboriginal groups on identifying and advancing priority projects, and seeking to ensure the program and its projects are undertaken in collaboration with Aboriginal groups.

### **8. Next Steps for DFO**

DFO will also be following up on feedback received during engagement. [DFO to INSERT]



## Appendices

**Appendix 01 – Information Packages Provided to Indigenous Groups**

**Appendix 02 – VFPA Presentation Material**

**Appendix 03 – DFO Presentation Material**

**Appendix 04 – DFO Frequently Asked Questions**

**Appendix 05 – Meeting Record from September 11, 2018 Information Session (Vancouver)**

**Appendix 06 – Meeting Record from October 16, 2018 Information Session (Vancouver Island)**

**Appendix 07 – Meeting Record from November 29, 2018 Information Session (Fraser Valley)**

**From:** [Olson, Charlotte](#)  
**To:** [Nutton, Byron](#); [Thorpe, Suzanne](#)  
**Cc:** [Scoble, Jemma](#); [Ruffo, Gord](#)  
**Subject:** RE: Updated AG Summary Report for DFO - and Call Tomorrow  
**Date:** 2019-January-23 3:12:47 PM  
**Attachments:** [image001.png](#)  
[2019-01-22 DFO-VFPA Arrangement-Aboriginal Consultation Summary Report-Rev1-FOR DFO.docx](#)  
[2019-01-24-03-600-VFPA-AGENDA-VFPA and DFO Liaison Meeting No 49-Rev0.docx](#)  
**Importance:** High

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Hi Byron and Suzanne,

Ahead of our 10am call tomorrow, VFPA has prepared an updated draft of the AG Summary Report (dated Jan 22/19, Rev1) attached here. This is the most current version.


The Rev1 updated Summary Report includes:

- The incorporation of DFO feedback provided on the Rev0 draft in early January, for example, you will see the re-organization of themes in Section 6 per your recommendations, and an update to Section 3.3 based on wording that was requested by TWN
- VFPA has updated our 'response content/next steps' in Section 7

The only outstanding item is the content that DFO is to provide please, to be included in Section 8, see the attachment.

We look forward to speaking about this on our call tomorrow.

An Agenda is attached here for our call, and the call number is in the Outlook invite previously sent:

- +1-604-449-3026 (Vancouver)
- Attendee access code: 

Cheers!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

**From:** Olson, Charlotte

**Sent:** Monday, January 21, 2019 3:20 PM

**To:** Ruffo, Gord <[Gord.Ruffo@portvancouver.com](mailto:Gord.Ruffo@portvancouver.com)>; 'Nutton, Byron' <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>; Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>

**Cc:** Scoble, Jemma <[Jemma.Scoble@portvancouver.com](mailto:Jemma.Scoble@portvancouver.com)>

**Subject:** RE: DFO Call w VFPA this Thursday and actions reminder

s.16(2)(c)

Hi All, per Gord's note below

Friendly reminder that VFPA is looking for the following as soon as DFO can provide:

1. DFO content for final AG summary report (requested by Jan 18)
2. DFO written comments/edits on August 2018 draft Arrangement (requested by Jan 18)

As discussed in early January, we will speak to the status of these items at our upcoming call this Thursday Jan 24<sup>th</sup> (10am – conference call).

I have re-attached the actions list from our Jan 4<sup>th</sup> call, red text shows updates on relevant items.

We are looking to stay on track with the timelines that we agreed to work toward.

Thanks all,

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

**From:** Ruffo, Gord

**Sent:** Friday, January 18, 2019 2:43 PM

**To:** 'Nutton, Byron' <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>; Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>

**Cc:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>

**Subject:** DFO input into the Summary Report

Hi Byron and Suzanne

We are working to finalize the Summary Report for your review and require your material. Are you on track to provide this to us this week?

**Gord Ruffo P.Eng.**  
Senior Project Manager  
Habitat Enhancement Program



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9018 | CELL: 604.202.8022  
[portvancouver.com](http://portvancouver.com)

**HABITAT BANK ARRANGEMENT:  
PORT OF VANCOUVER HABITAT BANK  
SUMMARY OF INDIGENOUS ENGAGEMENT ON  
VFPA AND DFO'S HABITAT BANK  
ARRANGEMENT**

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

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1.	Overview and Purpose .....	3
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3.	Engagement Activities.....	5
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5.	Presentation & Other Material .....	8
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## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### **1. Overview and Purpose**

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- Ensure that Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program; and
- Ensure Indigenous groups are provided information regarding the habitat banking agreement.

This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements.

### **2. Indigenous Groups within VFPA's Operational Area**

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement, regular communication and to ensure that the protection of fish and fish habitat is considered in the development of the Asia-Pacific Gateway.

Vancouver Fraser Port Authority operates within the asserted traditional territories of 37 Coast Salish Indigenous groups and in proximity to the treaty settlement lands of the Tsawwassen First Nation (see Figure 1 below)

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

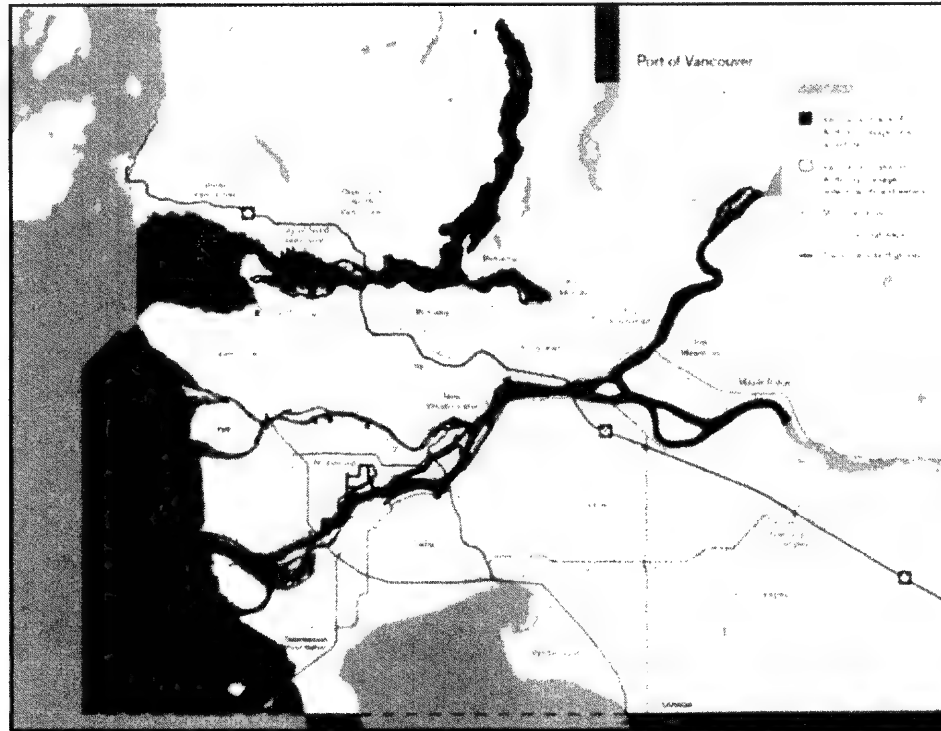


Figure 1

The following Indigenous groups' asserted traditional territories or treaty lands intersect with the lands and waters managed by VFPA:

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  - Stz'uminus First Nation

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Lyackson First Nation
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  - Leq'a:mel First Nation
  - Matsqui First Nation
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  - Shxwha:y Village First Nation
  - Skawahlook First Nation
- Sto:lo Tribal Council
  - Chawathil First Nation
  - Cheam First Nation
  - Kwantlen First Nation
  - Kwaw-kwaw-Apilt First Nation
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- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### 3. Engagement Activities

The following activities were undertaken:

- Sharing of Information Packages and letter
- Facilitation of Information Sessions
- Offers of One-on-One Meetings



### 3.1 Information Packages

Information packages were shared with the Indigenous groups identified in Section 2.

These packages included:

- A description of how habitat banks are used to offset serious harm to fisheries.
- A description of how habitat credits are deposited into the habitat bank.
- A description of how habitat credits may be withdrawn from the habitat bank and the DFO-led Indigenous consultation process associated with this withdrawal.
- An overview of VFPA's Aboriginal Consultation and Engagement Process for proposed habitat banking projects. This process demonstrates how VFPA intends to engage and consult with Indigenous groups within the identified service area and identifies how Indigenous input and knowledge will be considered throughout the project identification, development, construction and post-construction phases. Opportunities for Indigenous (e.g. technical design review, fieldwork, monitoring, contracting, employment and training) will also be identified as well as the process for reporting back to Indigenous groups on feedback received.
- Other relevant materials (e.g. Habitat Enhancement Program presentations, project overview/information sheets, map of Habitat Enhancement Program projects, etc.).

VFPA sought to confirm receipt of this information by Indigenous groups through follow up communications. VFPA provided responses to any questions, comments and feedback from Indigenous groups received in advanced of focused information sessions.

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- Presentation of material included in the Information Packages
- Attendance and support from DFO regional staff
- Questions/feedback from Indigenous groups

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<u>Information Session No.2</u> October 16, 2018	Brentwood Bay, BC Brentwood Bay Resort
<u>Information Session No.3</u> November 29, 2018	Chilliwack, BC People of the River Referrals Office

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

**3.3 One-on-One meetings**

One-on-one meetings or other types of engagement activities (e.g. presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. TWN advised VFPA that they would not participate in the VFPA/DFO engagement regarding the HEP and banking agreement as they are already engaged in discussions with VFPA and DFO regarding administration of VFPA's habitat bank. No other requests for meetings, additional information or feedback have been received to date.

**4. Attendance Records for Information Sessions**

## Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	
Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

## Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo Sinead Deery
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

### Information Session No. 3 – Chilliwack, BC (November 29, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	
Lower Fraser Fisheries Alliance	

## 5. Presentation & Other Material

Presentation and other materials shared during the VFPA/DFO engagement included the following:

- Package of information and accompanying letter (August 2018) s.19(1)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a Fisheries Act Authorization
  - Proponent-led Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

### 6. Concerns, Issues and Input Received

Several key topics were raised during this engagement process. Feedback included the following:

#### **VFPA-DFO Habitat Banking Arrangement:**

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation.
- Importance of ensuring that constructed project sites are protected into the future.
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required.

#### **Habitat Banking (specifically):**

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects.
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact.

#### **VFPA/HEP Engagement Processes:**

- General comment that the HEP consultation is understood and has been effective.
- General support for projects built to date and consultation process undertaken by VFPA.
- Desire for Indigenous involvement in all aspects and phases of HEP projects: provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- Interest in providing input into what is monitored (i.e. testing taste and quality of fish for consumption rather than just fish presence and health).

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Sharing of information: collection data, monitoring data, fish use data, construction monitoring reports. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.). There is value in making information available.
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Suggestion to work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

### **DFO Aboriginal Consultation and Regulatory Processes:**

- General consultation concerns: adequacy of consultation at all levels of First Nations governance (for all aspects of habitat banking, including the policy itself). Suggestion that DFO consult at a higher level at First Nations' organizations.
- Concerns that DFO consultation is completed on a project by project basis – one project at a time when Authorization is sought. Importance of First Nations being informed of projects that do not get an Authorization due to impacts.
- Concern that the Crown is swayed to grant Authorizations if habitat is already banked.
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights.
- Guiding principles for offsetting should include that offsetting be done to also support First Nations cultural values.
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries.
- General perspective that habitat is not "created" but only restored; something must be displaced to create new habitat.
- There is perception that DFO approves all authorizations.
- Comment that there is a need to use Western science and Traditional Knowledge in the monitoring and evaluation of projects.
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm.
- Comment that First Nations do not feel properly consulted by DFO.

### **General, Scientific, Technical and Cultural:**

- Request for projects to be built on the South Arm of the Fraser River and Vancouver Island.
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dying system design with benefits to fish).

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Consideration of climate change, sea level rise and flood management in project planning.
- General interest in shellfish restoration & other food-harvest value species.
- Cultural considerations are important: intertwine legacy and cultural history into projects.
- Cultural loss of marine aquatic species (clam beds).
- Development of educational resources, including First Nations specific educational aspects and opportunities (important species, cultural history).
- Need for balance: infrastructure development and healthy environment.
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat that VFPA is enhancing.

### **General state of the environment:**

- Concern regarding the inability to compensate for historic impacts / damage / destruction of environment – lack of industry accountability for historic damages / destruction of habitat.
- Need for balance of infrastructure development and the environment.
- Concern regarding the impacts of dyking on the lower Fraser River.
- Concern regarding the impacts of fish farms.
- Importance needs to be placed on protecting native species.
- Access to and health of marine aquatic species (clam beds) for First Nations.

### **Other:**

- *Fisheries Act* review comments not adequately addressed from an Indigenous perspective; comment that the review processes was too short.
- Importance of long-term foreshore management planning and VFPA support of this work and other initiatives.
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive.
- Concern with "Indigenous engagement" being at the end of DFO's slide deck.

## 7. Next steps for VFPA

As previously noted, the objectives of the DFO/VFPA engagement process were to ensure that Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program; and to ensure Indigenous groups are provided information regarding the DFO-VFPA habitat banking agreement.

In response to Indigenous groups' feedback on the engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program, VFPA will:

- Review the Habitat Enhancement Program consultation process in light of feedback received to consider opportunities to improve its effectiveness, for example:
  - Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including, provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
  - Consider opportunities and a process for enhanced integration of Indigenous input and priorities into planning for monitoring (i.e. testing taste and quality of fish for consumption rather than just fish presence and health).
  - Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, work happening by other organizations (Indigenous, NGO, governments, etc.).
  - Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.
- Identify opportunities to integrate feedback, priorities and ideas raised by Aboriginal groups during engagement, for example:
  - Consider producing cultural/educational materials for projects and the Habitat Enhancement Program
  - Working with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
  - Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
  - Consider opportunities (i.e. workshops and initiatives) related in shellfish restoration & other food-harvest value species.
  - Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.

- Consider opportunities for DNA analysis be undertaken on stocks of fish for foreshore habitat that VFPA is enhancing.
- Report out to Aboriginal groups on any changes from the review of the consultation process resulting from the engagement process and feedback shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement, VFPA will:
  - Share this report, along with copies of the habitat banking-related information presented during the engagement process.
  - Notify Indigenous groups when a new DFO-VFPA habitat banking agreement is in place.
  - Respond to any future questions or requests for information related to the DFO-VFPA habitat banking agreement.

The Habitat Enhancement Program has ongoing engagement and consultation which allows for continued opportunities to address any concern or issues, to work with Aboriginal groups on identifying and advancing priority projects, and seeking to ensure the program and its projects are undertaken in collaboration with Aboriginal groups.

## **8. Next Steps for DFO**

DFO will also be following up on feedback received during engagement. [DFO to INSERT]



## **Appendices**

**Appendix 01 – Information Packages Provided to Indigenous Groups**

**Appendix 02 – VFPA Presentation Material**

**Appendix 03 – DFO Presentation Material**

**Appendix 04 – DFO Frequently Asked Questions**

**Appendix 05 – Meeting Record from September 11, 2018 Information Session (Vancouver)**

**Appendix 06 – Meeting Record from October 16, 2018 Information Session (Vancouver Island)**

**Appendix 07 – Meeting Record from November 29, 2018 Information Session (Fraser Valley)**



## Meeting Agenda

### Habitat Enhancement Program

#### DFO / VFPA Liaison Meeting: Conference Call – January 2019

Meeting No. 49

**Location:** Conference Call (VFPA Vancouver Meeting Room)

**Date:** Thursday January 24th (10:00 AM– 11:00 AM)

<b>Attendees:</b>	Byron Nutton (DFO)	Charlotte Olson (VFPA)
	Suzanne Thorpe (DFO)	Gord Ruffo (VFPA)
		Jemma Scoble – optional (VFPA)

#### **AGENDA:**

1. Review of Agenda
2. Priority Actions & Timelines – to support Arrangement execution by March 2019
  - a) Finalize AG Summary Report, issue, and conclude Indigenous Engagement
    - DFO's Section 8 content for summary report requested asap; VFPA provided updated draft dated Jan 22/19
    - VFPA to issue final report to AGs for Jan 31/19
  - b) Discuss status of Timeline to execute new Arrangement in Q1 2019
    - DFO written comments on Aug 14/18 version of draft Arrangement outstanding
    - DFO to confirm signatory to Arrangement
    - VFPA to target revision and re-issue of final draft Arrangement to DFO by early-mid February
    - DFO and VFPA to execute within March 2019
3. Other Items for Discussion
4. Next Steps/Actions

**From:** Olson, Charlotte  
**To:** Ruffo, Gord; Nutton, Byron; Thorpe, Suzanne  
**Subject:** Conference Call (Every 2 Weeks) with VFPA-Habitat Bank Arrangement  
**Start:** 2019-January-24 10:00:00 AM  
**End:** 2019-January-24 11:00:00 AM  
**Location:** VFPA office – Vancouver Room (6) – 100 The Pointe, 999 Canada Place

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Hi Byron & Suzanne

As discussed, please accept this meeting request as a placeholder for a conference call, every 2 weeks, commencing on Thursday Jan 24

Call Objective: Bi-monthly (every 2 weeks) check-in on status of our Actions to achieve a proposed new Arrangement by March 2019

Call In Details:

\* +1-604-449-3026 (Vancouver)

\* Attendee access code: [REDACTED]

Thanks!, Charlotte

s.16(2)(c)

## Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Thursday, January 24, 2019 12:41 PM  
**To:** Nutton, Byron; Thorpe, Suzanne  
**Cc:** Scoble, Jemma; Ruffo, Gord  
**Subject:** RE: Jan 24 DFO-VFPA Call Actions - Follow Up  
**Attachments:** 2019-01-24-03-600-VFPA-HEP-DFO Meeting Actions-Rev0.docx

Hi Byron and Suzanne

Thanks for the call this morning – please find attached the Actions I recorded, please advise if something was missed or captured incorrectly.

Looking forward to seeing your report content shortly – as discussed, please organize as you see fit, and all new text suggestions are welcome.

Cheers, Charlotte

**From:** Olson, Charlotte  
**Sent:** Wednesday, January 23, 2019 3:13 PM  
**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; 'Thorpe, Suzanne' <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Cc:** Scoble, Jemma <Jemma.Scoble@portvancouver.com>; Ruffo, Gord <Gord.Ruffo@portvancouver.com>  
**Subject:** RE: Updated AG Summary Report for DFO - and Call Tomorrow  
**Importance:** High

Hi Byron and Suzanne,

Ahead of our 10am call tomorrow, VFPA has prepared an updated draft of the AG Summary Report (dated Jan 22/19, Rev1) attached here. This is the most current version.

The Rev1 updated Summary Report includes:

- The incorporation of DFO feedback provided on the Rev0 draft in early January, for example, you will see the re-organization of themes in Section 6 per your recommendations, and an update to Section 3.3 based on wording that was requested by TWN
- VFPA has updated our 'response content/next steps' in Section 7

The only outstanding item is the content that DFO is to provide please, to be included in Section 8, see the attachment. We look forward to speaking about this on our call tomorrow.

An Agenda is attached here for our call, and the call number is in the Outlook invite previously sent:

- +1-604-449-3026 (Vancouver)
- Attendee access code: [REDACTED]

Cheers!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

s.16(2)(c)

**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**
**DATE:** January 24, 2019 (10am-10:30am)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING – February 7<sup>th</sup>** (10am Conference Call)

**ATTENDEES:**
**DFO Representatives:**

Byron Nutton (BN), DFO  
Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO)

**CURRENT MEETING ACTIONS (STATUS – updated following Jan 24/19 Call):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
<b>2019 Actions:</b>				
1.	DFO to provide 'Section 8/DFO Response' section content to VFPA, so VFPA can incorporate into final draft "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" report	DFO (BN)	Jan 25/19	VFPA sent DFO most current draft, Rev1 (Jan 22/19) to work on. Once DFO sends content, VFPA will aim to provide the final draft report to DFO the week of Jan 28-Feb 1, with a target of total finalization by EOD Friday Feb 1.
2.	VFPA to send final "Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement" report to AGs	VFPA (CO & JS)	Feb 4/19	Dependent on above, goal to send to AGs Feb 4th
3.	Byron to reach out to [REDACTED] (TWN) regarding DFO's required 'close-out' related to engagement on VFPA-DFO Arrangement	DFO (BN)	Per Byron	
4.	DFO to provide written/email comments to VFPA on the Aug 14/18 version of the VFPA-DFO habitat banking Arrangement	DFO (BN)	By Feb 1/19	In order to achieve a March execution, DFO is requested to respond ASAP to VFPA. CO/VFPA legal will then revise and prepare a final draft Arrangement for DFO final review in early February 2019.

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
5.	DFO and VFPA are committed to working toward a FINAL Arrangement, ready for signatures by March 8/19 at the latest	VFPA (CO) DFO (BN)	March 8	See #4 above; a Final Arrangement must be ready to sign by March 8 VFPA requires min. of 3 weeks for signatures, this is the critical path.
6.	VFPA to provide DFO with 2018 Annual Report(s)	VFPA (CO)	Feb TBC	
7.	VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)	VFPA (CO)	Feb TBC	VFPA is currently working with TWN to prepare a joint submission to DFO on this aspect, targeted for submittal to DFO in February.



## Meeting Agenda

### Habitat Enhancement Program

#### DFO / VFPA Liaison Meeting: Conference Call – January 2019

Meeting No. 49

**Location:** Conference Call (VFPA Vancouver Meeting Room)

**Date:** Thursday January 24th (10:00 AM– 11:00 AM)

<b>Attendees:</b>	Byron Nutton (DFO)	Charlotte Olson (VFPA)
	Suzanne Thorpe (DFO)	Gord Ruffo (VFPA)
		Jemma Scoble – optional (VFPA)

#### **AGENDA:**

- 1. Review of Agenda**
- 2. Priority Actions & Timelines – to support Arrangement execution by March 2019**
  - a) Finalize AG Summary Report, issue, and conclude Indigenous Engagement
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    - VFPA to issue final report to AGs for Jan 31/19
  - b) Discuss status of Timeline to execute new Arrangement in Q1 2019
    - DFO written comments on Aug 14/18 version of draft Arrangement outstanding
    - DFO to confirm signatory to Arrangement
    - VFPA to target revision and re-issue of final draft Arrangement to DFO by early-mid February
    - DFO and VFPA to execute within March 2019
- 3. Other Items for Discussion**
- 4. Next Steps/Actions**

## Thorpe, Suzanne

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**From:** Thorpe, Suzanne  
**Sent:** Thursday, January 24, 2019 10:55 AM  
**To:** Nutton, Byron  
**Subject:** Newer version (Jan 24) of draft Summary Report language for VFPA-DFO engagement report  
**Attachments:** 2019-01-24\_VFPA\_HBA-SummaryRpt\_Categorized-DFO-Responses\_v2.docx

For discussion.

Call me back once you have read over draft.

### Suzanne Thorpe

Partnerships, Standards and Guidelines Unit/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
Government of Canada/ Gouvernement du Canada  
200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512

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**1. VFPA-DFO Habitat Banking Arrangement:**

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation
- Importance of ensuring that constructed project sites are protected into the future
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required [could leave here or place into 3<sup>rd</sup> category].

**Proposed DFO response (draft):**

In response to concern brought forward regarding the term "*conservation project*" when referring to habitat banking projects, DFO and VFPA have modified the language of the Port of Vancouver Habitat Bank Arrangement such that the conservation projects identified in the updated 2019 Arrangement between VFPA and DFO will be referred to as "*habitat banking projects*". It should be noted that, if approved, the new *Fisheries Act* (under Bill C-68) will use the terminology "*conservation project*" meaning "a work, undertaking or activity that is carried on by a proponent for the purpose of creating, restoring or enhancing fish habitat within a service area in order to acquire habitat credits". In region, DFO could modify the language used in the regionally-signed Arrangements respecting Fish Habitat Banks by referring to such regional projects as "*habitat banking projects*", in place of conservation projects. Regional staff have elevated the concern identified by Indigenous groups in the Pacific Region to National Headquarters staff.

In the development of any habitat bank, it is intended that all projects will be fully functional and protected as fish habitat over the long-term.

Early engagement on regional Habitat Banking Arrangements will be undertaken by proponents as part of the process of establishing a new or updated regional Habitat Banking Arrangement, as well for any new proposed habitat banking projects. DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposed to use banked habitat credits as part of a Request for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet their offsetting requirements.

Through consultation DFO will endeavour to understand potential adverse impacts on asserted or established Aboriginal or treaty right land, where appropriate, identify way to minimize those adverse impacts through avoidance, mitigation, or offsetting measures incorporated as conditions of the Authorization, where appropriate.

**2. Habitat Banking (specifically):**

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact

**Proposed DFO response (draft):**

**Commented [TS1]:** s. 40 of Bill C-68

HB will become Crown conduct under the new Act and will REQUIRE consultation. Currently in policy.

Policy written that it is not actual CC or that it is required but it is good governance.

**SUMMARY**

This enactment amends the *Fisheries Act* to, among other things,

- (a) require that, when making a decision under that Act, the Minister shall consider any adverse effects that the decision may have on the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the *Constitution Act, 1982*, include provisions respecting the consideration and protection of Indigenous knowledge of the Indigenous peoples of Canada, and authorize the making of agreements with Indigenous governing bodies to further the purpose of the *Fisheries Act*;
- (b) add a purpose clause and considerations for decision-making under that Act;
- (c) empower the Minister to establish advisory panels and to set fees, including for the provision of regulatory processes;
- (d) provide measures for the protection of fish and fish habitat with respect to works, undertakings or activities that may result in the death of fish or the harmful alteration, disruption or destruction of fish habitat, including in ecologically significant areas, as well as measures relating to the modernization of the regulatory framework such as authorization of projects, establishment of standards and codes of practice, creation of fish habitat banks by a proponent of a project and establishment of a public registry;

Aboriginal and Treaty rights will also be considered in the planning and establishment of a proponent-led habitat bank and, in particular, planning habitat banking projects and defining the service area\* to ensure there are no resulting adverse impacts on Aboriginal or Treaty rights.

\* service area – a geographical area or boundary that encompasses the habitat banking projects that can reasonably be expected to provide appropriate offsetting. It must be based on the consideration of ecological criteria and fisheries management objectives, including the survival and recovery of aquatic species at risk and, if applicable, jurisdictional boundaries.

### 3. Engagement Processes:

- General support that the HEPs consultation is understood and has been effective
- General support for projects built to date and consultation process undertaken by VFPA
- FN desire for involvement in all aspects and phases of HEP projects: provision of input to project ID, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation
- Monitoring including FN values (food quality for consumption), use of Western science and TEK, potential use of DNA analysis to determine stock use
- Sharing of information: collection data, monitoring data. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.)
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

### Proposed DFO response (draft):

DFO will engage with Indigenous groups to share information and seek views on any new Habitat Banking Arrangements, as well as to seek feedback and engage in processes that provide opportunities for involvement in habitat banking projects. DFO is committed to sharing information and data, and will consider all Indigenous Traditional Knowledge toward project considerations and in support of the successful implementation of habitat projects.

Consider adding some discussion regarding RECONCILIATION here.

### 4. Aboriginal consultation and Regulatory processes:

- General consultation concerns: adequacy of consultation at all levels of FN governance (for all aspects of habitat banking, including the policy itself)
- Concerns that DFO consultation is completed on project by project basis – one project at a time when Authorization is sought Importance of FN being informed of projects that do not get an Authorization due to impacts
- Concern that Crown is swayed to grant Authorizations if habitat is already banked
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights
- Guiding principles for offsetting should include that offsetting be done to also support FN cultural values
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries
- General perspective that habitat is not “created” but only restored, something is displaced to create new habitat

- There is perception DFO approves all authorizations
- Need for using Traditional Knowledge in the monitoring and evaluation of projects
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm

**Proposed DFO response (draft):**

As outlined in DFOs "Fishery Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led habitat bank arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the Fisheries Act or Species at Risk Act. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led habitat bank arrangement.

Regional staff have elevated the concern from Indigenous groups regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction and monitoring and evaluation of projects. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. We look forward to continued discussion on how to incorporate these concerns into policy and projects.

**5. General scientific, technical and cultural:**

- Request for projects to be built on South Arm Fraser R./ Vancouver Island
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dying system design with benefits to fish)
- Consideration of climate change, sea level rise and flood management in project planning
- General interest in shellfish restoration & other food-harvest value species
- Cultural considerations are important: intertwine legacy and cultural history into projects
- Cultural loss of marine aquatic species (clam beds)
- Development of educational resources, including FN specific educational aspects and opportunities (important species, cultural history)
- Need for balance: infrastructure development and healthy environment

regional staff have elevated the concern from Indigenous groups regarding the language used in the national policy to National Headquarters staff

**Proposed DFO response (draft):**

As outlined in

**6. General state of the environment:**

- Compensation for historic impacts/ damage/ destruction of environment – lack of industry accountability for historic damages/ destruction of habitat
- Need for balance of infrastructure development and environment
- Impacts of dyking on Fraser River
- Impacts of fish farms

- Importance needs to be placed on protecting native species
- Access to and health of marine aquatic species (clam beds) for FN

**Proposed DFO response (draft):**

As outlined in

**7. Other:**

- *Fisheries Act* Review comments not adequately addressed
- Importance of long-term foreshore management planning and VFPA to support this work and other initiatives
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive

**Proposed DFO response (draft):**

As outlined in

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**From:** Olson, Charlotte  
**To:** Nutton, Byron  
**Cc:** Scoble, Jemma; Ruffo, Gord; Thorpe, Suzanne  
**Subject:** Re: Jan 24 DFO-VFPA Call Actions - Follow Up  
**Date:** 2019-January-25 5:45:15 PM

---

Thank you Byron for this content. We will review what you have provided first thing Monday & appreciate you sending this.

Have a good weekend all.

Regards,  
Charlotte

Mobile  
604-349-4111

On Jan 25, 2019, at 5:32 PM, Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca<<mailto:Byron.Nutton@dfo-mpo.gc.ca>>> wrote:

Hi Charlotte,

Please see below for your consideration...Section 7 (response) and Section 8 (reporting). Green text was copied from VFPA draft response, yellow text highlights a need to update the corresponding sub-section in Section 6.

#### 7. Responses and Next Steps

##### VFPA-DFO Habitat Banking Arrangement and Habitat Banking Specifically:

In response to concern brought forward regarding the term “conservation project” in the context of habitat banking, DFO and VFPA have adopted the use of the term “habitat banking projects” in the Port of Vancouver Habitat Bank Arrangement, and DFO will consider the same for any future Habitat Banking Arrangements that might be proposed in the Pacific Region. In addition, this concern has been communicated to DFO staff in Ottawa that work on development of habitat banking guidance.

Both DFO and VFPA recognize the importance of ensuring that habitat banking project sites are protected into the future. In this regard, VFPA will monitor and manage projects to meet their objectives until such a time as the credits associated with those projects are removed from the bank, and in the longer-term those sites will be subject to the protection provisions of the Fisheries Act.

Comments and concerns with respect to early engagement and consultation related to habitat banking are addressed by VFPA and DFO, respectively in the two sections below.

##### VFPA/HEP Engagement Processes:

VFPA will review the Habitat Enhancement Program consultation process in light of feedback received to consider opportunities to improve its effectiveness, for example:

- o Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including, provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- o Consider opportunities and a process for enhanced integration of Indigenous input and priorities into planning for monitoring (i.e. testing taste and quality of fish for consumption rather than just fish presence and health).
- o Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, work happening by other organizations (Indigenous, NGO, governments, etc.).
- o Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.

DFO Indigenous Consultation and Regulatory Processes: NOTE update Section 6 tile from Aboriginal to Indigenous:

The Government of Canada is committed to advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, Inuit-Crown and government-to-government relationship based on the recognition of rights, respect, cooperation and partnership. Fisheries and Oceans Canada is now also in the early stages of reviewing its laws and policies and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

As outlined in DFO's "Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led habitat bank arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the Fisheries Act or Species at Risk Act. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led habitat bank arrangement.

DFO is required to consult with Indigenous groups prior to making decisions under the federal Fisheries Act. Therefore, when a proponent proposes to use banked habitat credits as part of an Application for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet offsetting requirements.

Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction, monitoring and evaluation of projects will be considered by DFO for any Habitat Banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

General, Scientific, Technical and Cultural and General state of the Environment:

DFO and VFPA appreciate the feedback provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective business. These items and concerns will continue to be considered moving forward, and in particular with respect to habitat banking VFPA will identify opportunities to integrate feedback, priorities and ideas raised during the engagement process, for example:

- o Consider producing cultural/educational materials for projects and the Habitat Enhancement Program
- o Working with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
- o Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- o Consider opportunities (i.e. workshops and initiatives) related in shellfish restoration & other food-harvest value species.
- o Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.
- o Consider opportunities for DNA analysis be undertaken on stocks of fish for foreshore habitat that VFPA is enhancing.

Other:

Comments regarding DFO's consultation process related to the review of the Fisheries Act have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

NOTE: remove last bullet in Section 6: Other (re: last slide of DFO's deck)

## 8. Reporting

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and feedback shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement, DFO and VFPA will:

- o Share this report, along with copies of the habitat banking-related information presented during the engagement process.
- o Notify Indigenous groups when a new DFO-VFPA habitat banking agreement is in place.
- o Respond to any future questions or requests for information related to the DFO-VFPA habitat banking agreement.

The Habitat Enhancement Program has ongoing engagement and consultation which allows for continued opportunities to address any concern or issues, to work with Aboriginal groups on identifying and advancing priority projects, and seeking to ensure the program and its projects are undertaken in collaboration with Aboriginal groups.

From: Olson, Charlotte <Charlotte.Olson@portvancouver.com<<mailto:Charlotte.Olson@portvancouver.com>>>  
Sent: 2019-January-24 12:41 PM  
To: Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca<<mailto:Byron.Nutton@dfo-mpo.gc.ca>>>; Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca<<mailto:Suzanne.Thorpe@dfo-mpo.gc.ca>>>  
Cc: Scoble, Jemma <Jemma.Scoble@portvancouver.com<<mailto:Jemma.Scoble@portvancouver.com>>>; Ruffo, Gord <Gord.Ruffo@portvancouver.com<<mailto:Gord.Ruffo@portvancouver.com>>>  
Subject: RE: Jan 24 DFO-VFPA Call Actions - Follow Up

Hi Byron and Suzanne

Thanks for the call this morning – please find attached the Actions I recorded, please advise if something was missed or captured incorrectly.

Looking forward to seeing your report content shortly – as discussed, please organize as you see fit, and all new text suggestions are welcome.

Cheers, Charlotte

From: Olson, Charlotte  
Sent: Wednesday, January 23, 2019 3:13 PM  
To: 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca<<mailto:Byron.Nutton@dfo-mpo.gc.ca>>>; 'Thorpe, Suzanne' <Suzanne.Thorpe@dfo-mpo.gc.ca<<mailto:Suzanne.Thorpe@dfo-mpo.gc.ca>>>  
Cc: Scoble, Jemma <Jemma.Scoble@portvancouver.com<<mailto:Jemma.Scoble@portvancouver.com>>>; Ruffo, Gord <Gord.Ruffo@portvancouver.com<<mailto:Gord.Ruffo@portvancouver.com>>>  
Subject: RE: Updated AG Summary Report for DFO - and Call Tomorrow  
Importance: High

Hi Byron and Suzanne,

Ahead of our 10am call tomorrow, VFPA has prepared an updated draft of the AG Summary Report (dated Jan 22/19, Rev1) attached here. This is the most current version.

The Rev1 updated Summary Report includes:

- The incorporation of DFO feedback provided on the Rev0 draft in early January, for example, you will see the re-organization of themes in Section 6 per your recommendations, and an update to Section 3.3 based on wording that was requested by TWN
- VFPA has updated our 'response content/next steps' in Section 7

The only outstanding item is the content that DFO is to provide please, to be included in Section 8, see the attachment.

We look forward to speaking about this on our call tomorrow.

An Agenda is attached here for our call, and the call number is in the Outlook invite previously sent:

+1-604-449-3026 (Vancouver)

Attendee access code: [REDACTED]

s.16(2)(c)

Cheers!

Charlotte Olson P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

No further information has been removed or severed from this page



**Thorpe, Suzanne**

---

**From:** Nutton, Byron  
**Sent:** Friday, January 25, 2019 3:52 PM  
**To:** Thorpe, Suzanne  
**Subject:** DRAFT

DFO suggestion for Section 7 (response) and Section 8 (reporting). Green text was copied from VFPA draft response, yellow text highlights a need to update the corresponding sub-section title in Section 6 to use Indigenous vs Aboriginal.

## 7. Responses and Next Steps

### VFPA-DFO Habitat Banking Arrangement and Habitat Banking Specifically:

In response to concern brought forward regarding the term "*conservation project*" in the context of habitat banking, DFO and VFPA have adopted the use of the term "*habitat banking projects*" in the Port of Vancouver Habitat Bank Arrangement, and DFO will consider the same for any future Habitat banking Arrangements that might be proposed in the Pacific Region. In addition, this concern has been communicated to DFO staff in Ottawa that work on development of habitat banking guidance.

Both DFO and VFPA recognize the importance of ensuring that habitat banking projects sites are protected into the future. In this regard, VFPA will monitor and manage projects to meet their objectives until such a time as the credits associated with those projects are removed from the bank and in the longer-term those sites will be subject to the protection provisions of the *Fisheries Act*.

Comments and concerns with respect to early engagement and consultation related to habitat banking are addressed by VFPA and DFO, respectively in the two sections below.

### VFPA/HEP Engagement Processes:

VFPA will review the Habitat Enhancement Program consultation process in light of feedback received to consider opportunities to improve its effectiveness, for example:

- Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including, provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
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- Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.

## **DFO Indigenous Consultation and Regulatory Processes: NOTE update Section 6 tile from Aboriginal to Indigenous**

STILL WORKING ON IT – will include some of the stuff re: consultation you previously had in the first section

### **General, Scientific, Technical and Cultural and General state of the Environment:**

DFO and VFPA appreciate the feedback provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective business. These items and concerns will continue to be considered moving forward, and in particular with respect to habitat banking VFPA will identify opportunities to integrate feedback, priorities and ideas raised during the engagement process, for example:

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- Consider opportunities (i.e. workshops and initiatives) related in shellfish restoration & other food-harvest value species.
- Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.
- Consider opportunities for DNA analysis be undertaken on stocks of fish for foreshore habitat that VFPA is enhancing.

### **Other:**

STILL WORKING ON IT

## **8. Reporting**

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and feedback shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement, DFO and VFPA will:

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- Respond to any future questions or requests for information related to the DFO-VFPA habitat banking agreement.

The Habitat Enhancement Program has ongoing engagement and consultation which allows for continued opportunities to address any concern or issues, to work with Aboriginal groups on identifying and advancing priority projects, and seeking to ensure the program and its projects are undertaken in collaboration with Aboriginal groups.

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices

Fisheries Protection Program | Programme de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

250-618-4268

No information has been removed or severed from this page

**Thorpe, Suzanne**

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**From:** Nutton, Byron  
**Sent:** Friday, January 25, 2019 4:12 PM  
**To:** Thorpe, Suzanne  
**Subject:** rest of it

**DFO Indigenous Consultation and Regulatory Processes: NOTE update Section 6 tile from Aboriginal to Indigenous**

The Government of Canada is committed to advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, Inuit-Crown and government-to-government relationship based on the recognition of rights, respect, cooperation and partnership. Fisheries and Oceans Canada is now also in the early stages of reviewing its laws and policies and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

As outlined in DFOs "Fishery Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led habitat bank arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the Fisheries Act or Species at Risk Act. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led habitat bank arrangement.

DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposes to use banked habitat credits as part of a Request for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet their offsetting requirements.

Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction and monitoring and evaluation of projects will be considered by DFO for any Habitat banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

**Other**

Comments regarding DFO's consultation process related to the review of the Fisheries Act have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

**NOTE: remove last bullet in Section 6: Other (re; last slide of DFOP's deck)**

*Byron Nutton, RPBio*

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

No information has been removed or severed from this page

**From:** Thorpe, Suzanne  
**Sent:** Tuesday, January 29, 2019 12:40 PM  
**To:** Nutton, Byron  
**Subject:** Draft Updates/ Information re: VFPA-DFO Habitat Banking Arrangement

Hey Byron;

As requested, I've put together some points for inclusion in email/ memo/ BN to RD regarding the VFPA-DFO Habitat Banking Arrangement (currently pending finalization and execution). Let me know if you feel additional work needs to be completed on these or if this is satisfactory for your consideration. I have coloured text I am uncertain should be included and also text provided as suggestions/ items for consideration as input. Note that in their revision to the HBA, VFPA is requesting 15 years with option for an additional 5, not 10.

Oh, and, it may be better to bring forward the outstanding item.

Points:

- DFO regional staff have been working with the Vancouver Fraser Port Authority (VFPA) on an updated and renewed Habitat Banking Arrangement (HBA), guided by the *FPP Interim Guide to Proponent-led Habitat Banking* (October 2016),
- The current Working Agreement (2012) expired in 2017. The Agreement was extended by letter from ~~Cheryl~~ for an additional one year, and then again to March 31, 2019.
- DFO and VFPA are working toward a final HBA, with a signature execution date targeted on or before March 31, 2019.
- Several key issues have been negotiated to the satisfaction of FPP and are addressed in the updated HBA:

1. Use of Credits by 3<sup>rd</sup> parties

The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2013 Agreement.

DFO worked with VFPA to set limitations around the third-party use of credits. In the updated HBA the use of third party credits is limited to the defined service area boundaries, and is solely in relation to conservation projects that facilitate development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the conservation project sites.

[from previous: VFPA insists that they require the ability to transfer credits to offset tenant and/or third party-led infrastructure projects - this provision exists in VFPA's current

Agreement. They also suggest that this would likely be a key issue to other port authorities and other proponents with similar jurisdictional oversight. Apparently this item was discussed between VFPA and Nick Winfield in October 2015 in Ottawa.]

## 2. Credit availability and valuation

The Interim Guide suggests that habitat credit valuation be mutually agreed up on based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat.

VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction. VFPA is encouraged to withdraw credits at the time they are fully functional and the habitat bank (i.e., offsetting for the project) proves its effectiveness. DFO has not provided for a phased approach to credit withdrawal due to administrative burden as well as uncertainty of fish habitat success associated with such an approach.

## 3. Land tenure

Conservation project site ownership or land tenure is deemed necessary to implement the conservation project and ensure the long-term protection and stewardship of conservation project sites, similar to the requirements for project specific offsetting (i.e., conventional offsetting).

VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking conservation projects until the withdrawal of the habitat credits from the bank.

## 4. Indigenous Engagement

DFO and VFPA cooperatively developed an Indigenous Engagement plan and held early engagement meetings with Indigenous groups to engage and seek feedback on the HBA as well as VFPAs plan for engagement related to future proponent-led habitat bank conservation projects (i.e., within the service area).

A report detailing the *Summary of Indigenous Engagement on VFPA and DFOs Habitat Bank Arrangement* is in final draft and is in progress of being shared with Indigenous groups for comment. Comments received by Indigenous groups have been reconciled and DFOs response to concerns brought forward are addressed in the report.

<could detail the one significant concern re: discomfort with the terminology used in habitat banking "conservation project"> but I feel it may be too specific

<could also detail when Consultation is required by DFO> necessity? OR, we could attach the summary report to the BN.

## 5. Duration of the Arrangement

The Interim Guide outlines a defined effective period for an Agreement (i.e., it includes an expiration date). The former Working Agreement was effective for 5 years. VFPA considered the agreement as a pilot/trial and were interested in a long-term arrangement (10-20 years).

DFO and VFPA have agreed to an effective period of **fifteen (15)** years, with a review at the end of each five (5) years period during which the Arrangement is in effect. The review of the effectiveness of the HBA and associated VFPA HEP project(s) management will be conducted by a review team consisting of DFO and VFPA staff, with the option of consultant support, reporting results of the review to the RD, Ecosystems Management. Option is provided to extend the HBA for an additional five (5) years upon the Proponents request.

The 15-20 year timeframe has been agreed to in order to address VFPAs long-term planning needs and request for certainty regarding project planning and implementation and the associated use of their habitat bank.

- Outstanding items that require resolve:

1. Confirmation of timeline for execution and signatories to the Arrangement.

VFPA has strongly requested execution of the Arrangement by 31 March 2019. If a new agreement is not completed by March 31, 2019, VFPA's construction and delivery programs could be delayed and this is a concern to VFPA.

FPP needs to confirm the timeline for execution of the new Arrangement between VFPA and DFO is feasible, as well as confirm signatories (name, position/ title).



**From:** Thorpe, Suzanne  
**To:** Nutton, Byron  
**Subject:** RE: RE - DFO Acceptance of Final IG Summary Report - PLS RESPOND  
**Date:** 2019-January-30 1:14:04 PM  
**Attachments:** image001.png  
2019-01-30\_DFO-VFPA Arrangement-IG ConsultationSummary RPT-Rev2-FINAL DRAFT-STedit.docx

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Hi Byron;

I have put some additional thought into the Final Draft of the DFO-VFPA Habitat Banking Arrangement. As you will note, there are several minor editorial changes required (grammatically), but further to that I have provided some modified wording for some sections and for one section, S3.1, I have suggested replacement in its entirety.

I have also made some suggestions/ comments in the bubble text boxes in margins.

Everything I have touched (I think) is highlighted in yellow; it probably appears like more changes than it is.

Have completed dotting i's and crossing t's, I think.

I'm done with it now ☺

Suzanne

s.21(1)(a)

s.21(1)(b)

**From:** Thorpe, Suzanne  
**Sent:** Tuesday, January 29, 2019 4:43 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: RE - DFO Acceptance of Final IG Summary Report - PLS RESPOND

Hi Byron -

I've reviewed the Final Draft of the Indigenous Engagement Summary report and there are a number of final edits to complete. I think the report is generally good from a completion standpoint, with a couple of noted omissions:

- S.1 should probably include a broad based statement about why DFO 'required' the engagement (replace outreach w/ engagement) – good governance, linkage to Authorizations and meeting offsetting requirements. Also, I'm thinking we may wish to consider that VFPA and DFO have considerable obligations (both) to complete this rather than DFO 'requiring it' so let's discuss the optics of how this section currently reads.
- Report needs to include mention of the Overview presented by DFO in the Info sessions in S.3.1
- S.3.3. Subsequent discussions w TWN? It still reads like they don't support the process or

that there may be outstanding issues with this group. Have you spoken to their representative yet?

I would like to do a once-over after reading the proposed Indigenous Engagement plan and ensure that all aspects of that plan have been adequately covered off in this report. We may wish to also look at the IG Team's recent document and consider if it's appropriate to incorporate a little bit of wording from those in the pre-amble as well as just double-check to ensure the 'tick boxes' are completed. I am assuming there is not an expectation that we will be filling out the forms at this time, or should we?

Otherwise, I think it's fine. I will send you an edited version tmo.

Suzanne

**From:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Sent:** Tuesday, January 29, 2019 2:30 PM  
**To:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Cc:** Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Subject:** RE: RE - DFO Acceptance of Final IG Summary Report - PLS RESPOND

Thanks Charlotte,

Suzanne and I will have a quick final read and I will get back to you ASAP.

Thanks,

Byron

**From:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Sent:** 2019-January-29 12:30 PM  
**To:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>; Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Cc:** Ruffo, Gord <[Gord.Ruffo@portvancouver.com](mailto:Gord.Ruffo@portvancouver.com)>; Scoble, Jemma <[Jemma.Scoble@portvancouver.com](mailto:Jemma.Scoble@portvancouver.com)>  
**Subject:** RE - DFO Acceptance of Final IG Summary Report - PLS RESPOND  
**Importance:** High


Good afternoon Byron,  
VFPA has incorporated DFO's content provided below on Jan 25/19, thank you – VFPA is also amendable to your suggested content re-organization as presented below.

**Please find attached the FINAL DRAFT of the report, dated Jan 28/19.**

In the attached, VFPA has:

1. Incorporated all DFO suggested content below, with no significant changes

Best available copy

2. Added one sentence in Section 1.0, page 3 (last sentence of last paragraph in Section 1.0), stating the following:  
*"Content presented in this report was jointly prepared by VFPA and DFO."*
3. As requested by DFO, removed the bullet in Section 6.0, page 11 that stated:  
*"Concern with "Indigenous engagement" being at the end of DFO's slide deck"*
4. Used the word "respective organizations" instead of "respective business" in Section 7.0, page 12, and below 

**Please respond by email that DFO accepts this report as the final draft, and VFPA will proceed to final formatting/polishing, bind as a final PDF (with all appendices), and VFPA will distribute to IGs.**

Please confirm back with me this week, we are targeting to send to IGs Monday Feb 4<sup>th</sup> at latest. We will ensure DFO is provided a final copy when distributed to IGs.

Thank you!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

**From:** Nutton, Byron [<mailto:Byron.Nutton@dfo-mpo.gc.ca>]  
**Sent:** Friday, January 25, 2019 5:32 PM  
**To:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Cc:** Scoble, Jemma <[Jemma.Scoble@portvancouver.com](mailto:Jemma.Scoble@portvancouver.com)>; Ruffo, Gord <[Gord.Ruffo@portvancouver.com](mailto:Gord.Ruffo@portvancouver.com)>; Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Subject:** RE: Jan 24 DFO-VFPA Call Actions - Follow Up

Hi Charlotte,

Please see below for your consideration...Section 7 (response) and Section 8 (reporting). Green text was copied from VFPA draft response, yellow text highlights a need to update the corresponding sub-section in Section 6.

Best available copy

## 7. Responses and Next Steps

### VFPA-DFO Habitat Banking Arrangement and Habitat Banking Specifically:

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and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

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Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction, monitoring and evaluation of projects will be considered by DFO for any Habitat Banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

#### **General, Scientific, Technical and Cultural and General state of the Environment:**

DFO and VFPA appreciate the feedback provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective **Duties**. These items and concerns will continue to be considered moving forward, and in particular with respect to habitat banking VFPA will **identify opportunities to integrate feedback, priorities and ideas raised during the engagement process, for example:**

- Consider producing cultural/educational materials for projects and the Habitat Enhancement Program**
- Working with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area**
- Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish)**
- Consider opportunities (i.e. workshops and initiatives) related in shellfish restoration & other food-harvest value species**
- Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects**
- Consider opportunities for DNA analysis be undertaken on stocks of fish for foreshore habitat that VFPA is enhancing**

**Other:**

Comments regarding DFO's consultation process related to the review of the *Fisheries Act* have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

**NOTE: remove last bullet in Section 6: Other (re: last slide of DFO's deck)**

## 8. Reporting

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and feedback shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement. DFO and VFPA will:

- Share this report, along with copies of the habitat banking-related information presented during the engagement process;
- Notify Indigenous groups when a new DFO-VFPA habitat banking agreement is in place;
- Respond to any future questions or requests for information related to the DFO-VFPA habitat banking agreement.

The Habitat Enhancement Program has ongoing engagement and consultation which allows for continued opportunities to address any concern or issues, to work with Aboriginal groups on identifying and advancing priority projects, and seeking to ensure the program and its projects are undertaken in collaboration with Aboriginal groups.

**HABITAT BANK ARRANGEMENT:  
PORT OF VANCOUVER HABITAT BANK**

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**SUMMARY OF INDIGENOUS ENGAGEMENT ON  
VFPA AND DFO'S HABITAT BANK  
ARRANGEMENT**

January 28, 2019 DRAFT  
Rev2

VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

**Table of Contents**

1.	Overview and Purpose .....	3
2.	Indigenous Groups within VFPA's Operational Area .....	3
3.	Engagement Activities.....	5
	3.1 Information Packages.....	65
	3.2 Information Sessions.....	6
	3.3 One-on-One meetings .....	76
4.	Attendance Records for Information Sessions.....	76
5.	Presentation & Other Material .....	8
6.	Concerns, Issues and Input Received .....	98
7.	Responses and Next Steps.....	11
8.	Reporting .....	1413
<b>Appendices.....</b>		<b>14</b>



## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### 1. Overview and Purpose

Vancouver Fraser Port Authority (VFPA) currently operates a habitat bank that was created through a formal ~~agreement~~ Working Agreement (2012) with Fisheries and Oceans Canada (DFO). This agreement will expire in March 31, 2019. ~~P-and prior to~~ entering into a new long-term habitat bank agreement, ~~DFO~~ and VFPA have undertaken engagement to ensure:

- Ensure that Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program (HEP); and
- Indigenous groups are provided information regarding ~~enter into the a renewed long-term Habitat banking-Banking agreementArrangement.~~

This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements. Content presented in this report was jointly prepared by VFPA and DFO.

### 2. Indigenous Groups within VFPA's Operational Area

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement ~~and~~, regular communication, ~~and as well as to by ensuring~~ that the protection of fish and fish habitat ~~is-are~~ considered in the development of the Asia-Pacific Gateway.

Vancouver Fraser Port Authority operates within the asserted traditional territories of 37 Coast Salish Indigenous groups and in proximity to the treaty settlement lands of the Tsawwassen First Nation (~~see refer to Figure 1-on the next page~~).

**Commented [TS1]:** Thinking about this overview – and I'll leave it as an option for consideration – it may be appropriate to include a sentence before the last paragraph that says something like:

"Both VFPA and DFO recognize the importance of undertaking meaningful engagement and consultation, based on considerations for good governance, enhanced relations and advancing reconciliation, as well as improving project outcomes. Through engagement VFPA and DFO endeavor to foster opportunities for collaboration, and seek support and input from Indigenous groups to advance the VFPA-DFO Habitat Banking Arrangement."

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**Commented [TS2]:** Should an additional sentence be included here to indicate: These groups are in proximity to VFPAs navigational jurisdiction which is also defined as the service area in the Arrangement?

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VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement



**Figure 1**

The following Indigenous groups' asserted traditional territories or treaty lands intersect with the lands and waters managed by VFPA:

- Musqueam Indian Band
- Squamish Nation
- Tsleil-Waututh Nation
- Tsawwassen First Nation
- Kwikwetlem First Nation
- Katzie First Nation
- Semiahmoo First Nation
- Qayqayt First Nation
- Hwlitsum
- Hul'qumi'num Treaty Group
  - Cowichan Tribes
  - Lake Cowichan First Nation
  - Penelakut Tribe
  - Halalt First Nation
  - Stz'uminus First Nation

January 28, 2019 DRAFT  
Rev2

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Lyackson First Nation
- Sto:lo Nation
  - Aitchelitz First Nation
  - Leq'a:mel First Nation
  - Matsqui First Nation
  - Popkum First Nation
  - Shxwha:y Village First Nation
  - Skawahlook First Nation
- Sto:lo Tribal Council
  - Chawathil First Nation
  - Cheam First Nation
  - Kwantlen First Nation
  - Kwaw-kwaw-Apilt First Nation
  - Scowlitz First Nation
  - Seabird Island First Nation
  - Shxw'ow'hamel First Nation
  - Skowkale First Nation
  - Soowahlie First Nation
  - Squiala First Nation
  - Sumas First Nation
  - Tzeachten First Nation
  - Yakweakwioose First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### 3. Engagement Activities

The following activities were undertaken:

- An letter was sent to Indigenous groups inviting them to attend the VFPA-DEO information sessions
- Sharing of Information packages were shared as attachments to the invitation letters

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### VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Follow up telephone calls were made to Indigenous groups as well as to garner feedback from Indigenous groups.
- Facilitation of Face-to-face Information Sessions were held in 3 locations.
- Offers of Additional communication and/or One-on-One Meetings were offered.

#### 3.1 Information Packages

Information packages were shared with the Indigenous groups identified in Section 2.

PLACEMENT – refer to comment. These packages included:

- A description of how habitat banks are used to offset serious harm to fisheries.
- A description of how habitat credits are deposited into the habitat bank.
- A description of how habitat credits may be withdrawn from the habitat bank and the DFO led Indigenous consultation process associated with this withdrawal.
- An overview of VFPA's Aboriginal Consultation and Engagement Process for proposed habitat banking projects. This process demonstrates how VFPA intends to engage and consult with Indigenous groups within the identified service area and identifies how Indigenous input and knowledge will be considered throughout the project identification, development, construction and post construction phases. Opportunities for Indigenous (e.g. technical design review, fieldwork, monitoring, contracting, employment and training) will also be identified as well as the process for reporting back to Indigenous groups on feedback received.
- Other relevant materials (e.g. Habitat Enhancement Program presentations, project overview/information sheets, map of Habitat Enhancement Program projects, etc.).

VFPA sought to confirm receipt of this information by Indigenous groups through follow up communications. VFPA provided responses to any questions, comments and feedback input from Indigenous groups received in advanced of focused information sessions.

#### 3.2 Information Sessions

Three information sessions (Lower Mainland, Vancouver Island and Fraser Valley) were arranged to provide an accessible location for participants that required minimal travel. A proposed agenda was provided in advance of these sessions for review by participants.

Key components of these information sessions were as follows:

- Presentation of the materials included in the Information Packages
- Attendance and support from DFO regional staff
- Questions/feedback from Indigenous groups and response by VFPA and DFO
- Recording of information and input received as well as feedback from Indigenous groups

The schedule for these Information sessions was as follows:

January 28, 2019 DRAFT  
Rev2

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**Commented [TS3]:** At first glance this is fine and CAN go out as is, but this wording seems to be from the proposed consultation plan ... what went out to the Indigenous groups in the letter to Chiefs in August 2018 was worded as follows (and I prefer following the letter content):

VFPA is providing the attached information that describes the following:

- VFPA's Habitat Enhancement Program, which manages the habitat bank
- VFPA's Aboriginal consultation and engagement process used for the delivery of proposed habitat projects that would be included in the habitat bank
- A recent habitat project example (New Brighton Park Shoreline Habitat Restoration Project) that was constructed for inclusion in VFPA's habitat bank
- DFO's overview of proponent-led habitat banking

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**Commented [TS4]:** I changed the word feedback to INPUT in most of this document, to ensure that the terminology reflects that Indigenous groups were 'inputting' as part of this engagement process.

I left the term "feedback" in the document where there was, say, another process that Indigenous groups were feeding into (or providing feedback to) – such as when we refer to the feedback we will forward to the Fisheries Act review team.

By definition the term "input" is more inclusive, so I thought it fit more appropriately in this document.

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## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

DATE	LOCATION/VENUE
<u>Information Session No.1</u> September 11, 2018	Vancouver, BC VFPA Office
<u>Information Session No.2</u> October 16, 2018	Brentwood Bay, BC Brentwood Bay Resort
<u>Information Session No.3</u> November 29, 2018	Chilliwack, BC People of the River Referrals Office

### 3.3 One-on-One meetings

One-on-one meetings or other types of engagement activities (e.g., presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. TWN advised VFPA that they would not participate in the VFPA/DFO engagement sessions regarding the HEP and habitat banking agreement as they are already engaged in ongoing discussions with VFPA and DFO regarding administration of VFPA's habitat bank.

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No group has made No other requests for additional meetings or further additional information, and no other additional input or feedback has been received to date since the information session.

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## 4. Attendance Records for Information Sessions

### Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson
	Jemma Scoble
	Gord Ruffo
DFO	Byron Nutton
	Suzanne Thorpe
	Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	
Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

### Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson

January 28, 2019 DRAFT  
Rev2

VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

	Jemma Scoble Gord Ruffo Sinead Deery
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

Information Session No. 3 – Chilliwack, BC (November 29, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	
Lower Fraser Fisheries Alliance	

## 5. Presentations & Other Materials

Presentations and other materials shared during the VFPA/DFO engagement included the following:

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January 28, 2019 DRAFT  
Rev2

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Package of information and accompanying letter (August 2018)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation
  - Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a *Fisheries Act* Authorization
  - Proponent-led Habitat Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

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## 6. Concerns, Issues and Input Received

Several key topics were raised during this engagement process. Feedback-Input that VFPA and DFO received included the following:

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### VFPA-DFO Habitat Banking Arrangement:

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation.
- Importance of ensuring that constructed project sites are protected into the future.
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required.

### Habitat Banking (specifically):

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects.
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact.

### VFPA/HEP Engagement Processes:

- General comment that the HEP consultation is understood and has been effective.

January 28, 2019 DRAFT  
Rev2

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- General support for projects built to date and consultation process undertaken by VFPA.
- Desire for Indigenous involvement in all aspects and phases of HEP projects: provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- Interest in providing input into what is monitored (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Sharing of information: collection data, monitoring data, fish use data, construction monitoring reports. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.). There is value in making information available.
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Suggestion to work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

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### **DFO Indigenous Consultation and Regulatory Processes:**

- General consultation concerns: adequacy of consultation at all levels of First Nations governance (for all aspects of habitat banking, including the policy itself). Suggestion that DFO consult at a higher level at First Nations' organizations.
- Concerns that DFO consultation is completed on a project by project basis – one project at a time when Authorization is sought. Importance of First Nations being informed of projects that do not get an Authorization due to impacts.
- Concern that the Crown is swayed to grant Authorizations if habitat is already banked.
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights.
- Guiding principles for offsetting should include that offsetting be done to also support First Nations cultural values.
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries.
- General perspective that habitat is not "created" but only restored; something must be displaced to create new habitat.
- There is perception that DFO approves all authorizations.
- Comment that there is a need to use Western science and Traditional Knowledge in the monitoring and evaluation of projects.
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm.
- Comment that First Nations do not feel properly consulted by DFO.

### **General, Scientific, Technical and Cultural:**

January 28, 2019 DRAFT  
Rev2



## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

- Request for projects to be built on the South Arm of the Fraser River and Vancouver Island.
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consideration of climate change, sea level rise and flood management in project planning.
- General interest in shellfish restoration & other food-harvest value species.
- Cultural considerations are important: intertwine legacy and cultural history into projects.
- Cultural loss of marine aquatic species (e.g., clam beds).
- Development of educational resources, including First Nations specific educational aspects and opportunities (e.g., important species, cultural history).
- Need for balance: infrastructure development and healthy environment.
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat that VFPA is enhancing.

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### General state of the environment:

- Concern regarding the inability to compensate for historic impacts / damage / destruction of environment – lack of industry accountability for historic damages / destruction of habitat.
- Need for a balance of infrastructure development and the environment.
- Concern regarding the impacts of dyking on the lower Fraser River.
- Concern regarding the impacts of fish farms.
- Importance needs to be placed on protecting native species.
- Access to and health of marine aquatic species (e.g., clam beds) for First Nations.

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### Other:

- *Fisheries Act* review comments not adequately addressed from an Indigenous perspective; comment that the review processes was too short.
- Importance of long-term foreshore management planning and VFPA support of this work and other initiatives.
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive.

## 7. Responses and Next Steps

### VFPA-DFO Habitat Banking Arrangement and Habitat Banking Specifically:

In response to concern brought forward regarding the term "*conservation project*" in the context of habitat banking, DFO and VFPA have adopted the use of the term "*habitat*"

January 28, 2019 DRAFT  
Rev2

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

banking projects" in the Port of Vancouver Habitat Bank Arrangement, and DFO will consider the same for any future Habitat Banking Arrangements that might be proposed in the Pacific Region. In addition, this concern has been communicated to DFO staff in Ottawa that work on the development of habitat banking guidance.

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Both DFO and VFPA recognize the importance of ensuring that habitat banking project sites are protected into the future. In this regard, VFPA will monitor and manage projects to meet their objectives until such a time as the credits associated with those projects are removed from the bank, and in the longer-term those sites will be subject to the protection provisions of the *Fisheries Act*.

Comments and concerns with respect to early engagement and consultation related to habitat banking are addressed by VFPA and DFO, respectively in the two sections below.

### VFPA/HEP Engagement Processes:

VFPA will review the Habitat Enhancement Program consultation process in light of feedback from the input received to consider opportunities to improve its effectiveness.

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- Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including the provision of input to: project identification, collection of data, design, construction, monitoring and specifically, goal-setting, decision making and evaluation.
- Consider opportunities and a process for enhanced integration of Indigenous input and identification of priorities into planning for monitoring (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, and work happening by other organizations (e.g., Indigenous, NGO, governments, etc.).
- Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.

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### DFO Indigenous Consultation and Regulatory Processes:

The Government of Canada is committed to advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, Inuit-Crown and government-to-government relationship based on the recognition of rights, respect, cooperation and partnership. Fisheries and Oceans Canada is now also in the early stages of reviewing its laws and policies and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

As outlined in DFO's "Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led habitat bank arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the *Fisheries Act* or *Species at Risk Act*. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led habitat bank arrangement.

DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposes to use banked habitat credits as part of an Application for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet offsetting requirements.

Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction, monitoring and evaluation of projects will be considered by DFO for any Habitat Banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

### General, Scientific, Technical and Cultural and General state of the Environment:

DFO and VFPA appreciate the feedback input provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective organizations. These items and concerns will continue to be considered moving forward.

In particular, with respect to habitat banking VFPA will identify opportunities to integrate feedback input received, as well as the priorities and ideas raised during the engagement process. VFPA will, for example:

- Consider producing cultural/educational materials for habitat banking projects and the Habitat Enhancement Program
- Work with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
- Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consider opportunities (i.e., workshops and initiatives) related to shellfish restoration & other food-harvest value species.
- Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.
- Consider opportunities for DNA analysis to be undertaken on fish stocks of fish for in foreshore habitats that VFPA is enhancing.

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## VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

### Other:

Comments regarding DFO's consultation process related to the review of the *Fisheries Act* have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

### 8. Reporting

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and feedback input shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement. DFO and VFPA will:

- Share this report, along with copies of the habitat banking-related information presented during the engagement process.
- Notify Indigenous groups when a new DFO-VFPA Habitat Banking Arrangement agreement is in place.
- Respond to any future questions or requests for information related to the DFO-VFPA Habitat Banking Arrangement habitat banking agreement.

The Habitat Enhancement Program provides for ongoing engagement and consultation which allows for continued opportunities to address any concern or issues. HEP will provide opportunities to Indigenous groups to work with Aboriginal groups on identifying and advancing priority projects, seeking and seek input to ensure the program and its projects are undertaken in collaboration with Indigenous groups.

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## Appendices

**Appendix 01 – Information Packages Provided to Indigenous Groups**

**Appendix 02 – VFPA Presentation Material**

January 28, 2019 DRAFT  
Rev2

VANCOUVER FRASER PORT AUTHORITY | Summary of Indigenous Engagement

**Appendix 03 – DFO Presentation Material**

**Appendix 04 – DFO Frequently Asked Questions**

**Appendix 05 – Meeting Record from September 11, 2018 Information Session (Vancouver)**

**Appendix 06 – Meeting Record from October 16, 2018 Information Session (Vancouver Island)**

**Appendix 07 – Meeting Record from November 29, 2018 Information Session (Fraser Valley)**

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**From:** Thorpe, Suzanne  
**To:** Olson, Charlotte  
**Cc:** Nutton, Byron  
**Subject:** Final Draft VFPA-DFO Indigenous Engagement summary report comments  
**Date:** 2019-January-31 12:55:54 PM  
**Attachments:** 2019-01-30\_DFO-VFPA Arrangement-IG\_ConsultationSummary\_RPT-Rev2-FINAL DRAFT-STedit.docx  
**Importance:** High

---

Charlotte;

Please review DFOs final draft edits pertaining to the proposed DFO-VFPA Habitat Bank Arrangement Indigenous Engagement Report Summary.

We reviewed the document in final detail and have made a number of grammatical and editorial suggestions, for your consideration (in yellow highlights).

Of note, DFO recommends that Section 3.1 be modified to reflect the language that was used in the letter which included the Information Package that was sent to Indigenous groups.

We have also recommended some additional Overview messaging in Section 1, for your consideration and word-smithing.

If you have concerns or wish to discuss, please just give either myself or Byron a call!

Suzanne  
O: 604.666.3512

**Pages 1660 to / à 1674  
are duplicates of  
sont des duplicatas des  
pages 1644 to / à 1658**

**From:** Olson, Charlotte  
**To:** Thorpe, Suzanne; Nutton, Byron  
**Subject:** RE: Final Draft VFPA-DFO Indigenous Engagement summary report comments  
**Date:** 2019-January-31 1:06:07 PM

---

Thanks, VFPA will review.

**Byron** – are we still anticipating an email from you with your final comments on the August 2018 Arrangement draft? We need those this week, as we discussed.

Please advise. Thank you.

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

**From:** Thorpe, Suzanne [mailto:Suzanne.Thorpe@dfo-mpo.gc.ca]  
**Sent:** Thursday, January 31, 2019 12:56 PM  
**To:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** Final Draft VFPA-DFO Indigenous Engagement summary report comments  
**Importance:** High

Charlotte;

Please review DFOs final draft edits pertaining to the proposed DFO-VFPA Habitat Bank Arrangement Indigenous Engagement Report Summary.

We reviewed the document in final detail and have made a number of grammatical and editorial suggestions, for your consideration (in yellow highlights).

Of note, DFO recommends that Section 3.1 be modified to reflect the language that was used in the letter which included the Information Package that was sent to Indigenous groups.

We have also recommended some additional Overview messaging in Section 1, for your consideration and word-smithing.

If you have concerns or wish to discuss, please just give either myself or Byron a call!

Suzanne  
O: 604.666.3512



**From:** [Olson, Charlotte](#)  
**To:** [Thorpe, Suzanne](#); [Nutton, Byron](#)  
**Cc:** [Scoble, Jemma](#); [Ruffo, Gord](#)  
**Subject:** RE: Final Draft VFPA-DFO Indigenous Engagement Summary Report - Issued Feb 1  
**Date:** 2019-February-01 1:15:41 PM  
**Attachments:** [image001.png](#)  
[2019-02-01 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev0-FINAL DRAFT-RED LINE.pdf](#)  
[2019-02-01 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev0-FINAL DRAFT.pdf](#)  
**Importance:** High

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Good afternoon Bryon and Suzanne

VFPA has reviewed and incorporated DFO's final comments sent Jan 31/19 into the attached final draft document (dated Feb 1/19).

Attached is:

1. RED LINE version of the Final Draft Report
2. **FINAL version (clean) of the Final Draft Report that will be distributed to IGs for review on Monday February 4<sup>th</sup>**

Suzanne – please refer to the redline document, for VFPA's responses to your comments sent Jan 31/19. You will see that generally we accepted the majority of your requested yellow text edits – and where we did not, I have made note/comment on the redline. Of note, I also revised the header to better reflect the content presented in this report (from VFPA and DFO). The final draft document is Rev0 (Feb 1/19) as it is now to be sent externally to IGs, this is VFPA's standard document control process.

Please call if you have any questions/concerns. Thanks for the collaborative efforts to get to a final report ready for distribution!

Regards,  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

**From:** Thorpe, Suzanne [mailto:Suzanne.Thorpe@dfo-mpo.gc.ca]  
**Sent:** Thursday, January 31, 2019 12:56 PM  
**To:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>

**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>

**Subject:** Final Draft VFPA-DFO Indigenous Engagement summary report comments

**Importance:** High

Charlotte;

Please review DFOs final draft edits pertaining to the proposed DFO-VFPA Habitat Bank Arrangement Indigenous Engagement Report Summary.

We reviewed the document in final detail and have made a number of grammatical and editorial suggestions, for your consideration (in yellow highlights).

Of note, DFO recommends that Section 3.1 be modified to reflect the language that was used in the letter which included the Information Package that was sent to Indigenous groups.

We have also recommended some additional Overview messaging in Section 1, for your consideration and word-smithing.

If you have concerns or wish to discuss, please just give either myself or Byron a call!

Suzanne

O: 604.666.3512

## **HABITAT BANK ARRANGEMENT: PORT OF VANCOUVER HABITAT BANK**

### **SUMMARY OF INDIGENOUS ENGAGEMENT ON VFPA AND DFO'S HABITAT BANK ARRANGEMENT**

February 1, 2019 DRAFT  
Rev0

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## Table of Contents

1. Overview and Purpose .....	3
2. Indigenous Groups within VFPA's Operational Area .....	3
3. Engagement Activities .....	5
3.1 Information Packages .....	6
3.2 Information Sessions .....	6
3.3 One-on-One meetings .....	7
4. Attendance Records for Information Sessions .....	7
5. Presentations & Other Materials .....	9
6. Concerns, Issues and Input Received .....	9
7. Responses and Next Steps .....	12
8. Reporting .....	14
<b>Appendices .....</b>	<b>15</b>

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1. Overview and Purpose	3¶
2. Indigenous Groups within VFPA's Operational Area	3¶
3. Engagement Activities	5¶
3.1 Information Packages	5¶
3.2 Information Sessions	6¶
3.3 One-on-One meetings	6¶
4. Attendance Records for Information Sessions	6¶
5. Presentation & Other Material	8¶
6. Concerns, Issues and Input Received	8¶
7. Responses and Next Steps	11¶
8. Reporting	13¶
Appendices	14¶

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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### 1. Overview and Purpose

Vancouver Fraser Port Authority (VFPA) currently operates a habitat bank that was created through a formal Working Agreement (2012) with Fisheries and Oceans Canada (DFO). This agreement will expire in March 31, 2019. Prior to entering into a new long-term Habitat Bank Arrangement, DFO and VFPA have undertaken engagement to ensure:

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- Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program (HEP); and,
- Indigenous groups are provided information regarding VFPA and DFO's intent to enter into a renewed long-term Habitat Bank Arrangement.

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Both VFPA and DFO recognize the importance of undertaking meaningful engagement and consultation, based on considerations for good governance, enhanced relations and advancing reconciliation, as well as improving project outcomes. Through engagement VFPA and DFO endeavor to foster opportunities for collaboration, and seek support and input from Indigenous groups to advance the VFPA-DFO Habitat Bank Arrangement.

**Commented [OC1]:** VFPA added this text as requested by DFO Jan 31/19

Other edits provided by DFO were also generally accepted in this Section 1

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This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements. Content presented in this report was jointly prepared by VFPA and DFO.

### 2. Indigenous Groups within VFPA's Operational Area

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement and regular communication, as well as by ensuring that the protection of fish and fish habitat are considered in the development of the Asia-Pacific Gateway.

Vancouver Fraser Port Authority operates within the asserted traditional territories of 37 Coast Salish Indigenous groups and in proximity to the treaty settlement lands of the Tsawwassen First Nation (refer to Figure 1 on the next page).

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Figure 1

The following Indigenous groups' asserted traditional territories or treaty lands intersect with the lands and waters managed by VFPA:

- Musqueam Indian Band
- Squamish Nation
- Tsleil-Waututh Nation
- Tsawwassen First Nation
- Kwikwetlem First Nation
- Katzie First Nation
- Semiahmoo First Nation
- Qayqayt First Nation
- Hwlitsum
- Hul'qumi'num Treaty Group
  - Cowichan Tribes
  - Lake Cowichan First Nation
  - Penelakut Tribe
  - Halalt First Nation
  - Stz'uminus First Nation

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- o Lyackson First Nation
- Sto:lo Nation
  - o Aitchelitz First Nation
  - o Leq'a:mel First Nation
  - o Matsqui First Nation
  - o Popkum First Nation
  - o Shxwha:y Village First Nation
  - o Skawahlook First Nation
- Sto:lo Tribal Council
  - o Chawathil First Nation
  - o Cheam First Nation
  - o Kwantlen First Nation
  - o Kwaw-kwaw-Apilt First Nation
  - o Scowlitz First Nation
  - o Seabird Island First Nation
  - o Shxw'ow'hamel First Nation
  - o Skowkale First Nation
  - o Soowahlie First Nation
  - o Squiala First Nation
  - o Sumas First Nation
  - o Tzeachten First Nation
  - o Yakweawkwoose First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### 3. Engagement Activities

The following activities were undertaken:

- An letter was sent to Indigenous groups inviting them to attend the VFPA-DFO information sessions
- Information packages were shared as attachments to the invitation letters

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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- Follow up telephone calls were made to Indigenous groups to ensure receipt of the materials as well as to garner support for attendance at the face-to-face information sessions
- Face-to-face information sessions were held in 3 locations
- Additional communication and/or one-on-one meetings were offered

### **3.1 Information Packages**

Information packages were shared with the Indigenous groups identified in Section 2. These packages included:

Commented [OC3]: DFO's comment here was rejected. VFPA feels this text is satisfactory, and no change.

- A description of how habitat banks are used to offset serious harm to fisheries.
- A description of how habitat credits are deposited into the habitat bank.
- A description of how habitat credits may be withdrawn from the habitat bank and the DFO-led Indigenous consultation process associated with this withdrawal.
- An overview of VFPA's Aboriginal Consultation and Engagement Process for proposed habitat banking projects. This process demonstrates how VFPA intends to engage and consult with Indigenous groups within the identified service area and identifies how Indigenous input and knowledge will be considered throughout the project identification, development, construction and post-construction phases. Opportunities for Indigenous c (e.g. technical design review, fieldwork, monitoring, contracting, employment and training) will also be identified as well as the process for reporting back to Indigenous groups on feedback received.
- Other relevant materials (e.g. Habitat Enhancement Program presentations, project overview/information sheets, map of Habitat Enhancement Program projects, etc.).

VFPA confirmed receipt of this information by Indigenous groups through follow up communications. VFPA provided responses to any questions, comments and input from Indigenous groups received in advanced of focused information sessions.

### **3.2 Information Sessions**

Three information sessions (Lower Mainland, Vancouver Island and Fraser Valley) were arranged to provide an accessible location for participants that required minimal travel. A proposed agenda was provided in advance of these sessions for review by participants.

Key components of these information sessions:

- Presentation of the materials included in the Information Packages
- Questions from Indigenous groups and response by VFPA and DFO
- Recording of information and input received as well as concerns or issues raised by Indigenous groups

The schedule for these Information sessions was as follows:

DATE	LOCATION/VENUE
Information Session No.1	Vancouver, BC

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February 1, 2019 DRAFT

Rev0

Page 6 of 15



VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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September 11, 2018	VFPA Office
<u>Information Session No.2</u>	Brentwood Bay, BC
October 16, 2018	Brentwood Bay Resort
<u>Information Session No.3</u>	Chilliwack, BC
November 29, 2018	People of the River Referrals Office

### 3.3 One-on-One meetings

One-on-one meetings or other types of engagement activities (e.g., presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. TWN advised VFPA that they would not participate in the VFPA/DFO engagement sessions regarding the HEP and new Habitat Bank Arrangement as they are already engaged in ongoing discussions with VFPA and DFO regarding administration of VFPA's habitat bank.

No other requests for meetings, additional information or feedback have been received to date.

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Commented [OC4]: VFPA is retaining this text as originally proposed.

## 4. Attendance Records for Information Sessions

### Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	
Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

### Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo Sinead Deery

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**VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement**

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DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

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**Information Session No. 3 – Chilliwack, BC (November 29, 2018)**

<b>ORGANIZATION</b>	<b>NAME OF INDIVIDUAL</b>
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	
Lower Fraser Fisheries Alliance	

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**February 1, 2019 DRAFT**

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Page 8 of 15

## 5. Presentations & Other Materials

Presentations and other materials shared during the VFPA/DFO engagement included the following:

- Package of information and accompanying letter (August 2018)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation
  - Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a *Fisheries Act* Authorization
  - Proponent-led Habitat Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

## 6. Concerns, Issues and Input Received

Several key topics were raised during this engagement process. Input that VFPA and DFO received included the following:

### VFPA-DFO Habitat Bank Arrangement:

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- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation.
- Importance of ensuring that constructed project sites are protected into the future.
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required.

### Habitat Banking (specifically):

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects.
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact.

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#### VFPA/HEP Engagement Processes:

- General comment that the HEP consultation is understood and has been effective.
- General support for projects built to date and consultation process undertaken by VFPA.
- Desire for Indigenous involvement in all aspects and phases of HEP projects: provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- Interest in providing input into what is monitored (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Sharing of information: collection data, monitoring data, fish use data, construction monitoring reports. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.). There is value in making information available.
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Suggestion to work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

#### DFO Indigenous Consultation and Regulatory Processes:

- General consultation concerns: adequacy of consultation at all levels of First Nations governance (for all aspects of habitat banking, including the policy itself). Suggestion that DFO consult at a higher level at First Nations' organizations.
- Concerns that DFO consultation is completed on a project by project basis – one project at a time when Authorization is sought. Importance of First Nations being informed of projects that do not get an Authorization due to impacts.
- Concern that the Crown is swayed to grant Authorizations if habitat is already banked.
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights.
- Guiding principles for offsetting should include that offsetting be done to also support First Nations cultural values.
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries.
- General perspective that habitat is not "created" but only restored; something must be displaced to create new habitat.
- There is perception that DFO approves all authorizations.
- Comment that there is a need to use Western science and Traditional Knowledge in the monitoring and evaluation of projects.
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm.

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- Comment that First Nations do not feel properly consulted by DFO.

**General, Scientific, Technical and Cultural:**

- Request for projects to be built on the South Arm of the Fraser River and Vancouver Island.
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consideration of climate change, sea level rise and flood management in project planning.
- General interest in shellfish restoration & other food-harvest value species.
- Cultural considerations are important: intertwine legacy and cultural history into projects.
- Cultural loss of marine aquatic species (e.g., clam beds).
- Development of educational resources, including First Nations specific educational aspects and opportunities (e.g., important species, cultural history).
- Need for balance: infrastructure development and healthy environment.
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat that VFPA is enhancing.

**General state of the environment:**

- Concern regarding the inability to compensate for historic impacts / damage / destruction of environment – lack of industry accountability for historic damages / destruction of habitat.
- Need for a balance of infrastructure development and the environment.
- Concern regarding the impacts of dyking on the lower Fraser River.
- Concern regarding the impacts of fish farms.
- Importance needs to be placed on protecting native species.
- Access to and health of marine aquatic species (e.g., clam beds) for First Nations.

**Other:**

- *Fisheries Act* review comments not adequately addressed from an Indigenous perspective; comment that the review processes was too short.
- Importance of long-term foreshore management planning and VFPA support of this work and other initiatives.
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive.

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## 7. Responses and Next Steps

### VFPA-DFO Habitat Bank Arrangement and Habitat Banking Specifically:

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In response to concern brought forward regarding the term "*conservation project*" in the context of habitat banking, DFO and VFPA have adopted the use of the term "*habitat banking projects*" in the Port of Vancouver Habitat Bank Arrangement, and DFO will consider the same for any future Habitat Banking Arrangements that might be proposed in the Pacific Region. In addition, this concern has been communicated to DFO staff in Ottawa that work on the development of habitat banking guidance.

Both DFO and VFPA recognize the importance of ensuring that habitat banking project sites are protected into the future. In this regard, VFPA will monitor and manage projects to meet their objectives until such a time as the credits associated with those projects are removed from the bank, and in the longer-term those sites will be subject to the protection provisions of the *Fisheries Act*.

Comments and concerns with respect to early engagement and consultation related to habitat banking are addressed by VFPA and DFO, respectively in the two sections below.

#### VFPA/HEP Engagement Processes:

VFPA will review the Habitat Enhancement Program consultation process in light of the input received to consider opportunities to improve its effectiveness. VFPA will:

- Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including the provision of input to: project identification, collection of data, design, construction, monitoring and specifically, in goal-setting, decision-making and evaluation.
- Consider opportunities and a process for enhanced integration of Indigenous input and identification of priorities into planning for monitoring (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, and work happening by other organizations (e.g., Indigenous, NGO, governments, etc.).
- Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.

#### DFO Indigenous Consultation and Regulatory Processes:

The Government of Canada is committed to advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, Inuit-Crown and government-to-government relationship based on the recognition of rights, respect, cooperation and partnership. Fisheries and Oceans Canada is now also in the early stages of reviewing its laws and policies and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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As outlined in DFO's "Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led Habitat Bank Arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the *Fisheries Act* or *Species at Risk Act*. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led Habitat Bank Arrangement.

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DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposes to use banked habitat credits as part of an Application for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet offsetting requirements.

Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction, monitoring and evaluation of projects will be considered by DFO for any Habitat Banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

**General, Scientific, Technical and Cultural and General state of the Environment:**

DFO and VFPA appreciate the input provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective organizations. These items and concerns will continue to be considered moving forward.

In particular, with respect to habitat banking VFPA will identify opportunities to integrate the input received, as well as the priorities and ideas raised during the engagement process. VFPA will:

- Consider producing cultural/educational materials for habitat banking projects and the Habitat Enhancement Program.
- Work with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
- Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consider opportunities (i.e., workshops and initiatives) related to shellfish restoration & other food-harvest value species.
- Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.
- Consider opportunities for DNA analysis to be undertaken on fish stocks in foreshore habitats that VFPA is enhancing.

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February 1, 2019 DRAFT

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Page 13 of 15

VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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**Other:**

Comments regarding DFO's consultation process related to the review of the *Fisheries Act* have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

**8. Reporting**

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and input shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement. DFO and VFPA will:

- Share this report, along with copies of the habitat banking-related information presented during the engagement process.
- Notify Indigenous groups when a new DFO-VFPA Habitat Bank Arrangement is in place.
- Respond to any future questions or requests for information related to the DFO-VFPA Habitat Bank Arrangement.

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The Habitat Enhancement Program provides for ongoing engagement and consultation which allows for continued opportunities to address any concern or issues. HEP will provide opportunities to Indigenous groups to identify and where possible, advance priority projects in collaboration with VFPA.

**Commented [OC5]:** DFO's suggested edits from Jan 31<sup>st</sup> were not accepted here in their entirety. VFPA owns the accountability for the text within this paragraph, and is satisfied with the final text presented here. No further changes.

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## Appendices

**Appendix 01 – Information Packages Provided to Indigenous Groups**

**Appendix 02 – VFPA Presentation Material**

**Appendix 03 – DFO Presentation Material**

**Appendix 04 – DFO Frequently Asked Questions**

**Appendix 05 – Meeting Record from September 11, 2018 Information Session (Vancouver)**

**Appendix 06 – Meeting Record from October 16, 2018 Information Session (Vancouver Island)**

**Appendix 07 – Meeting Record from November 29, 2018 Information Session (Fraser Valley)**

**HABITAT BANK ARRANGEMENT:  
PORT OF VANCOUVER HABITAT BANK  
SUMMARY OF INDIGENOUS ENGAGEMENT ON  
VFPA AND DFO'S HABITAT BANK  
ARRANGEMENT**

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### Table of Contents

1.	Overview and Purpose .....	3
2.	Indigenous Groups within VFPA's Operational Area .....	3
3.	Engagement Activities .....	5
	3.1 Information Packages.....	6
	3.2 Information Sessions .....	6
	3.3 One-on-One meetings .....	7
4.	Attendance Records for Information Sessions .....	7
5.	Presentations & Other Materials .....	9
6.	Concerns, Issues and Input Received.....	9
7.	Responses and Next Steps .....	12
8.	Reporting .....	14
<b>Appendices.....</b>		<b>15</b>

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 1. Overview and Purpose

Vancouver Fraser Port Authority (VFPA) currently operates a habitat bank that was created through a formal Working Agreement (2012) with Fisheries and Oceans Canada (DFO). This agreement will expire in March 31, 2019. Prior to entering into a new long-term Habitat Bank Arrangement, DFO and VFPA have undertaken engagement to ensure:

- Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program (HEP); and,
- Indigenous groups are provided information regarding VFPA and DFOs intent to enter into a renewed long-term Habitat Bank Arrangement.

Both VFPA and DFO recognize the importance of undertaking meaningful engagement and consultation, based on considerations for good governance, enhanced relations and advancing reconciliation, as well as improving project outcomes. Through engagement VFPA and DFO endeavor to foster opportunities for collaboration, and seek support and input from Indigenous groups to advance the VFPA-DFO Habitat Bank Arrangement.

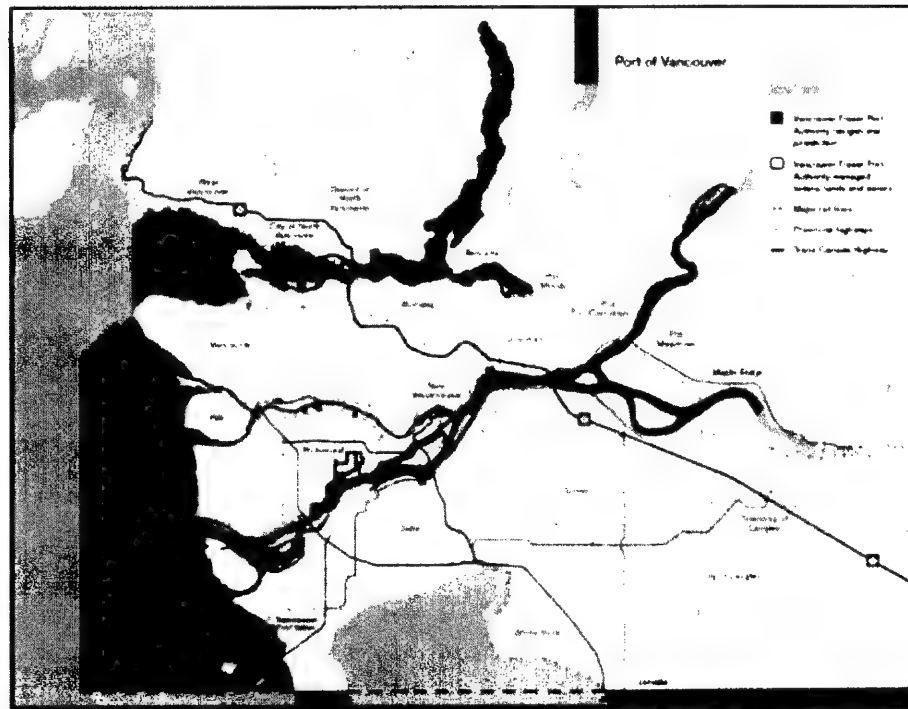
This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements. Content presented in this report was jointly prepared by VFPA and DFO.

### 2. Indigenous Groups within VFPA's Operational Area

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement and regular communication, as well as by ensuring that the protection of fish and fish habitat are considered in the development of the Asia-Pacific Gateway.

Vancouver Fraser Port Authority operates within the asserted traditional territories of 37 Coast Salish Indigenous groups and in proximity to the treaty settlement lands of the Tsawwassen First Nation (refer to Figure 1 on the next page).

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement



**Figure 1**

The following Indigenous groups' asserted traditional territories or treaty lands intersect with the lands and waters managed by VFPA:

- Musqueam Indian Band
- Squamish Nation
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- Tsawwassen First Nation
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  - Halalt First Nation
  - Stz'uminus First Nation

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

- Lyackson First Nation
- Sto:lo Nation
  - Aitchelitz First Nation
  - Leq'a:mel First Nation
  - Matsqui First Nation
  - Popkum First Nation
  - Shxwha:y Village First Nation
  - Skawahlook First Nation
- Sto:lo Tribal Council
  - Chawathil First Nation
  - Cheam First Nation
  - Kwantlen First Nation
  - Kwaw-kwaw-Apilt First Nation
  - Scowlitz First Nation
  - Seabird Island First Nation
  - Shxw'ow'hamel First Nation
  - Skowkale First Nation
  - Soowahlie First Nation
  - Squiala First Nation
  - Sumas First Nation
  - Tzeachten First Nation
  - Yakweakwioose First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### 3. Engagement Activities

The following activities were undertaken:

- An letter was sent to Indigenous groups inviting them to attend the VFPA-DFO information sessions
- Information packages were shared as attachments to the invitation letters

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

- Follow up telephone calls were made to Indigenous groups to ensure receipt of the materials as well as to garner support for attendance at the face-to-face information sessions
- Face-to-face information sessions were held in 3 locations
- Additional communication and/or one-on-one meetings were offered

### 3.1 Information Packages

Information packages were shared with the Indigenous groups identified in Section 2. These packages included:

- A description of how habitat banks are used to offset serious harm to fisheries.
- A description of how habitat credits are deposited into the habitat bank.
- A description of how habitat credits may be withdrawn from the habitat bank and the DFO-led Indigenous consultation process associated with this withdrawal.
- An overview of VFPA's Aboriginal Consultation and Engagement Process for proposed habitat banking projects. This process demonstrates how VFPA intends to engage and consult with Indigenous groups within the identified service area and identifies how Indigenous input and knowledge will be considered throughout the project identification, development, construction and post-construction phases. Opportunities for Indigenous c (e.g. technical design review, fieldwork, monitoring, contracting, employment and training) will also be identified as well as the process for reporting back to Indigenous groups on feedback received.
- Other relevant materials (e.g. Habitat Enhancement Program presentations, project overview/information sheets, map of Habitat Enhancement Program projects, etc.).

VFPA confirmed receipt of this information by Indigenous groups through follow up communications. VFPA provided responses to any questions, comments and input from Indigenous groups received in advanced of focused information sessions.

### 3.2 Information Sessions

Three information sessions (Lower Mainland, Vancouver Island and Fraser Valley) were arranged to provide an accessible location for participants that required minimal travel. A proposed agenda was provided in advance of these sessions for review by participants.

Key components of these information sessions:

- Presentation of the materials included in the Information Packages
- Questions from Indigenous groups and response by VFPA and DFO
- Recording of information and input received as well as concerns or issues raised by Indigenous groups

The schedule for these Information sessions was as follows:

DATE	LOCATION/VENUE
<u>Information Session No.1</u>	Vancouver, BC

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

September 11, 2018	VFPA Office
<u>Information Session No.2</u> October 16, 2018	Brentwood Bay, BC Brentwood Bay Resort
<u>Information Session No.3</u> November 29, 2018	Chilliwack, BC People of the River Referrals Office

### 3.3 One-on-One meetings

One-on-one meetings or other types of engagement activities (e.g., presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. TWN advised VFPA that they would not participate in the VFPA/DFO engagement sessions regarding the HEP and new Habitat Bank Arrangement as they are already engaged in ongoing discussions with VFPA and DFO regarding administration of VFPA's habitat bank.

No other requests for meetings, additional information or feedback have been received to date.

## 4. Attendance Records for Information Sessions

### Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	
Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

### Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo Sinead Deery

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

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### Information Session No. 3 – Chilliwack, BC (November 29, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	
Lower Fraser Fisheries Alliance	

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 5. Presentations & Other Materials

Presentations and other materials shared during the VFPA/DFO engagement included the following:

- Package of information and accompanying letter (August 2018)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation
  - Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a *Fisheries Act* Authorization
  - Proponent-led Habitat Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

### 6. Concerns, Issues and Input Received

Several key topics were raised during this engagement process. Input that VFPA and DFO received included the following:

#### **VFPA-DFO Habitat Bank Arrangement:**

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation.
- Importance of ensuring that constructed project sites are protected into the future.
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required.

#### **Habitat Banking (specifically):**

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects.
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### **VFPA/HEP Engagement Processes:**

- General comment that the HEP consultation is understood and has been effective.
- General support for projects built to date and consultation process undertaken by VFPA.
- Desire for Indigenous involvement in all aspects and phases of HEP projects: provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- Interest in providing input into what is monitored (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Sharing of information: collection data, monitoring data, fish use data, construction monitoring reports. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.). There is value in making information available.
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Suggestion to work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

### **DFO Indigenous Consultation and Regulatory Processes:**

- General consultation concerns: adequacy of consultation at all levels of First Nations governance (for all aspects of habitat banking, including the policy itself). Suggestion that DFO consult at a higher level at First Nations' organizations.
- Concerns that DFO consultation is completed on a project by project basis – one project at a time when Authorization is sought. Importance of First Nations being informed of projects that do not get an Authorization due to impacts.
- Concern that the Crown is swayed to grant Authorizations if habitat is already banked.
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights.
- Guiding principles for offsetting should include that offsetting be done to also support First Nations cultural values.
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries.
- General perspective that habitat is not "created" but only restored; something must be displaced to create new habitat.
- There is perception that DFO approves all authorizations.
- Comment that there is a need to use Western science and Traditional Knowledge in the monitoring and evaluation of projects.
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

- Comment that First Nations do not feel properly consulted by DFO.

### **General, Scientific, Technical and Cultural:**

- Request for projects to be built on the South Arm of the Fraser River and Vancouver Island.
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consideration of climate change, sea level rise and flood management in project planning.
- General interest in shellfish restoration & other food-harvest value species.
- Cultural considerations are important: intertwine legacy and cultural history into projects.
- Cultural loss of marine aquatic species (e.g., clam beds).
- Development of educational resources, including First Nations specific educational aspects and opportunities (e.g., important species, cultural history).
- Need for balance: infrastructure development and healthy environment.
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat that VFPA is enhancing.

### **General state of the environment:**

- Concern regarding the inability to compensate for historic impacts / damage / destruction of environment – lack of industry accountability for historic damages / destruction of habitat.
- Need for a balance of infrastructure development and the environment.
- Concern regarding the impacts of dyking on the lower Fraser River.
- Concern regarding the impacts of fish farms.
- Importance needs to be placed on protecting native species.
- Access to and health of marine aquatic species (e.g., clam beds) for First Nations.

### **Other:**

- *Fisheries Act* review comments not adequately addressed from an Indigenous perspective; comment that the review processes was too short.
- Importance of long-term foreshore management planning and VFPA support of this work and other initiatives.
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 7. Responses and Next Steps

#### **VFPA-DFO Habitat Bank Arrangement and Habitat Banking Specifically:**

In response to concern brought forward regarding the term "*conservation project*" in the context of habitat banking, DFO and VFPA have adopted the use of the term "*habitat banking projects*" in the Port of Vancouver Habitat Bank Arrangement, and DFO will consider the same for any future Habitat Banking Arrangements that might be proposed in the Pacific Region. In addition, this concern has been communicated to DFO staff in Ottawa that work on the development of habitat banking guidance.

Both DFO and VFPA recognize the importance of ensuring that habitat banking project sites are protected into the future. In this regard, VFPA will monitor and manage projects to meet their objectives until such a time as the credits associated with those projects are removed from the bank, and in the longer-term those sites will be subject to the protection provisions of the *Fisheries Act*.

Comments and concerns with respect to early engagement and consultation related to habitat banking are addressed by VFPA and DFO, respectively in the two sections below.

#### **VFPA/HEP Engagement Processes:**

VFPA will review the Habitat Enhancement Program consultation process in light of the input received to consider opportunities to improve its effectiveness. VFPA will:

- Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including the provision of input to: project identification, collection of data, design, construction, monitoring and specifically, in goal-setting, decision-making and evaluation.
- Consider opportunities and a process for enhanced integration of Indigenous input and identification of priorities into planning for monitoring (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, and work happening by other organizations (e.g., Indigenous, NGO, governments, etc.).
- Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.

#### **DFO Indigenous Consultation and Regulatory Processes:**

The Government of Canada is committed to advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, Inuit-Crown and government-to-government relationship based on the recognition of rights, respect, cooperation and partnership. Fisheries and Oceans Canada is now also in the early stages of reviewing its laws and policies and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

As outlined in DFO's "Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led Habitat Bank Arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the *Fisheries Act* or *Species at Risk Act*. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led Habitat Bank Arrangement.

DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposes to use banked habitat credits as part of an Application for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet offsetting requirements.

Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction, monitoring and evaluation of projects will be considered by DFO for any Habitat Banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

### **General, Scientific, Technical and Cultural and General state of the Environment:**

DFO and VFPA appreciate the input provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective organizations. These items and concerns will continue to be considered moving forward.

In particular, with respect to habitat banking VFPA will identify opportunities to integrate the input received, as well as the priorities and ideas raised during the engagement process. VFPA will:

- Consider producing cultural/educational materials for habitat banking projects and the Habitat Enhancement Program.
- Work with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
- Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consider opportunities (i.e., workshops and initiatives) related to shellfish restoration & other food-harvest value species.
- Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.
- Consider opportunities for DNA analysis to be undertaken on fish stocks in foreshore habitats that VFPA is enhancing.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### **Other:**

Comments regarding DFO's consultation process related to the review of the *Fisheries Act* have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

### **8. Reporting**

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and input shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement. DFO and VFPA will:

- Share this report, along with copies of the habitat banking-related information presented during the engagement process.
- Notify Indigenous groups when a new DFO-VFPA Habitat Bank Arrangement is in place.
- Respond to any future questions or requests for information related to the DFO-VFPA Habitat Bank Arrangement.

The Habitat Enhancement Program provides for ongoing engagement and consultation which allows for continued opportunities to address any concern or issues. HEP will provide opportunities to Indigenous groups to identify and where possible, advance priority projects in collaboration with VFPA.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### **Appendices**

**Appendix 01 – Information Packages Provided to Indigenous Groups**

**Appendix 02 – VFPA Presentation Material**

**Appendix 03 – DFO Presentation Material**

**Appendix 04 – DFO Frequently Asked Questions**

**Appendix 05 – Meeting Record from September 11, 2018 Information Session (Vancouver)**

**Appendix 06 – Meeting Record from October 16, 2018 Information Session (Vancouver Island)**

**Appendix 07 – Meeting Record from November 29, 2018 Information Session (Fraser Valley)**



**From:** [Hwang, Jason](#)  
**To:** [Fanos, Brad](#); [Magnan, Alain](#)  
**Cc:** [Nutton, Byron](#)  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement  
**Date:** 2019-February-01 4:14:32 PM  
**Attachments:** [Clean Version - VFPA Habitat Bank Arrangement 2019-01.docx](#)  
**Importance:** High

---

Hi Brad and Al. This matter requires action from you. I have highlighted in yellow the main action point in Byron's email below. Byron provides a good summary of context in his note. As you are likely aware VFPA is anxious to see this resolved before the current agreement expires. If you have any questions or want to discuss any context let us know, otherwise we await your approval so that we can get back to VFPA.

Jason

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-01-19 4:02 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Jason,

As discussed, please see attached the latest version of the proposed renewed Port of Vancouver Habitat Bank Arrangement. This version incorporates the changes DFO put forward in March 2018, and other than minor editorial changes it remains the same since that time. Please note that I have already updated the identified DFO contact from Team Lead, PSG, FPP to Manger, Integrated Planning, FFHPP to reflect our new organizational structure.

VFPA is looking for confirmation that DFO still supports this draft so that it can be put through final formatting and sent up for sign-off before the current agreement expires at the end of March. Please note that, consistent with the guidance document, the DFO sign-off is Regional Director, EMB.

**One outstanding item to be resolved:**

**Duration of the Arrangement:** The current Working Agreement was effective for 5 years, but it was considered to be a pilot/trial and VFPA is interested in a longer term for the new arrangement (20+ years). The RD had previously identified concerns with such a long term and was supportive of a 10 year term. In the most recent draft VFPA have suggested a compromise of 15 years. My recommendation is that we accept the 15 year term, particularly given that the arrangement provides for a review at the end of each five (5) years period during which the Arrangement is in effect.

**Indigenous engagement summary:**

During the fall of 2018 DFO and VFPA completed the jointly developed Indigenous engagement plan. The notes from each of the 3 engagement sessions held in the fall of 2018 were sent to the participants in early January and a final summary report will be sent later

today.

Based on input received during the engagement VFPA is considering some changes to Annex G which documents the engagement process that VFPA will undertake in relation to their future management of the habitat bank, and both DFO and VFPA have agreed to change terminology from “conservation project” to “habitat banking project” in the final version of the arrangement to address concerns raised at the engagement sessions – these edits are not yet reflected in the attached draft.

Please note that the Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process in favour of continuing one-on-one discussions with VFPA and DFO that have been on-going since 2017. Confirmation from TWN regarding their support (or at least lack of opposition) is outstanding, but it is my understanding that they are close to reaching an separate bi-lateral agreement with VFPA to resolve any remaining concerns and I will ensure that the outcome of these discussions is documented and forwarded prior to the arrangement being forwarded for sign-off.

**Reminder of major items that were considered and resolved prior to and including the edits provided by DFO in March 2018, as reflected in the attached draft:**

**Use of Credits by 3<sup>rd</sup> parties:** The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.

**Credit valuation:** The Interim Guide suggests that habitat credit valuation be mutually agreed up on based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.

**Land tenure:** Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

**Indigenous Engagement:** DFO and VFPA cooperatively developed an Indigenous Engagement plan and held early engagement meetings with Indigenous groups to engage and seek feedback on the habitat bank as well as VFPAs plan for engagement related to future proponent-led

habitat banking projects. A report detailing the *Summary of Indigenous Engagement on VFPA and DFOs Habitat Bank Arrangement* is in final draft and is in progress of being shared with Indigenous groups for comment. Comments received by Indigenous groups have been reconciled and DFOs response to concerns brought forward are addressed in the report.

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**From:** Olson, Charlotte  
**To:** Nutton, Byron  
**Subject:** Re: draft arrangement  
**Date:** 2019-February-01 5:33:45 PM

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Thank you Byron, I've headed out of the office for the weekend but we can connect on Monday for sure.

Your comments are noted below, thanks. My intent was to now proceed to prepare the final draft Feb 2019 Arrangement version [REDACTED] - and anything else recieved from your Director (hopefully in short order).

We still require confirmation from DFO on who you'd like to be listed as DFO's signatory. Chat next week.

Have a great weekend!

Regards,  
Charlotte

Mobile  
604-349-4111

On Feb 1, 2019, at 4:43 PM, Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca<<mailto:Byron.Nutton@dfo-mpo.gc.ca>>> wrote:

Hi Charlotte,

The draft arrangement is with my Director for his concurrence and I will provide any update as soon as I have it.

In the meantime, as previously discussed the DFO contact identified in sections 6 and 12 needs to be updated from Team Lead, Partnerships, Standards and Guidelines, Fisheries Protection Program, DFO Pacific Region to Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region.

Also, we agreed to replace the term "conservation project" with "habitat banking project" to address the concerns raised during the engagement session in Brentwood Bay. However, in order to be consistent with DFO's guidance documents, etc. I suggest that rather than simply replacing them all we also define it somewhere or cross-reference the terminology so it is clear that "habitat banking projects" referenced in this arrangement are indeed analogous to "conservation projects".

I am in the office and will touch bases with you before the end of the day.

Cheers,

Byron Nutton, RPBio

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

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s.21(1)(b)

**HABITAT BANK ARRANGEMENT:  
PORT OF VANCOUVER HABITAT BANK  
SUMMARY OF INDIGENOUS ENGAGEMENT ON  
VFPA AND DFO'S HABITAT BANK  
ARRANGEMENT**

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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## Table of Contents

1. Overview and Purpose .....	3
2. Indigenous Groups within VFPA's Operational Area .....	3
3. Engagement Activities .....	5
3.1 Information Packages .....	6
3.2 Information Sessions .....	6
3.3 One-on-One meetings .....	7
4. Attendance Records for Information Sessions .....	7
5. Presentations & Other Materials .....	9
6. Concerns, Issues and Input Received .....	9
7. Responses and Next Steps .....	12
8. Reporting .....	14
<b>Appendices .....</b>	<b>15</b>

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2. Indigenous Groups within VFPA's Operational Area 3¶  
3. Engagement Activities 5¶  
3.1 Information Packages 5¶  
3.2 Information Sessions 6¶  
3.3 One-on-One meetings 6¶  
4. Attendance Records for Information Sessions 6¶  
5. Presentations & Other Materials 8¶  
6. Concerns, Issues and Input Received 8¶  
7. Responses and Next Steps 11¶  
8. Reporting 13¶  
Appendices 14¶

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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### 1. Overview and Purpose

Vancouver Fraser Port Authority (VFPA) currently operates a habitat bank that was created through a formal Working Agreement (2012) with Fisheries and Oceans Canada (DFO). This agreement will expire in March 31, 2019. Prior to entering into a new long-term Habitat Bank Arrangement, DFO and VFPA have undertaken engagement to ensure:

- Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program (HEP); and,
- Indigenous groups are provided information regarding VFPA and DFOs intent to enter into a renewed long-term Habitat Bank Arrangement.

Both VFPA and DFO recognize the importance of undertaking meaningful engagement and consultation, based on considerations for good governance, enhanced relations and advancing reconciliation, as well as improving project outcomes. Through engagement VFPA and DFO endeavor to foster opportunities for collaboration, and seek support and input from Indigenous groups to advance the VFPA-DFO Habitat Bank Arrangement.

This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements. Content presented in this report was jointly prepared by VFPA and DFO.

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**Commented [OC1]:** VFPA added this text as requested by DFO Jan 31/19

Other edits provided by DFO were also generally accepted in this Section 1

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### 2. Indigenous Groups within VFPA's Operational Area

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement and regular communication, as well as by ensuring that the protection of fish and fish habitat are considered in the development of the Asia-Pacific Gateway.

Vancouver Fraser Port Authority operates within the asserted traditional territories of 37 Coast Salish Indigenous groups and in proximity to the treaty settlement lands of the Tsawwassen First Nation (refer to Figure 1 on the next page).

**Commented [OC2]:** DFO's suggested comment was not-accepted here, as page 4 begins with a statement that is comparative. No change.

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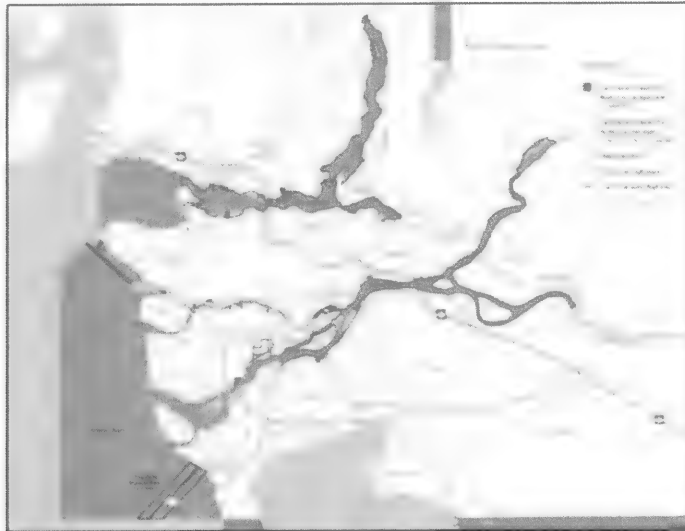


Figure 1

The following Indigenous groups' asserted traditional territories or treaty lands intersect with the lands and waters managed by VFPA:

- Musqueam Indian Band
- Squamish Nation
- Tsleil-Waututh Nation
- Tsawwassen First Nation
- Kwikwetlem First Nation
- Katzie First Nation
- Semiahmoo First Nation
- Qayqayt First Nation
- Hwlitsum
- Hul'qumi'num Treaty Group
  - Cowichan Tribes
  - Lake Cowichan First Nation
  - Penelakut Tribe
  - Halalt First Nation
  - Stz'uminus First Nation

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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- Lyackson First Nation
- Sto:lo Nation
  - Aitchelitz First Nation
  - Leq'a:mel First Nation
  - Matsqui First Nation
  - Popkum First Nation
  - Shxwha:y Village First Nation
  - Skawahlook First Nation
- Sto:lo Tribal Council
  - Chawathil First Nation
  - Cheam First Nation
  - Kwantlen First Nation
  - Kwaw-kwaw-Apilt First Nation
  - Scowlitz First Nation
  - Seabird Island First Nation
  - Shxw'ow'hamel First Nation
  - Skowkale First Nation
  - Soowahlie First Nation
  - Squiala First Nation
  - Sumas First Nation
  - Tzeachten First Nation
  - Yakweakwioose First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### **3. Engagement Activities**

The following activities were undertaken:

- An letter was sent to Indigenous groups inviting them to attend the VFPA-DFO information sessions
- Information packages were shared as attachments to the invitation letters

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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- Follow up telephone calls were made to Indigenous groups to ensure receipt of the materials as well as to garner support for attendance at the face-to-face information sessions
- Face-to-face information sessions were held in 3 locations
- Additional communication and/or one-on-one meetings were offered

### **3.1 Information Packages**

Information packages were shared with the Indigenous groups identified in Section 2.

[These packages included:]

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- A description of how habitat banks are used to offset serious harm to fisheries.
- A description of how habitat credits are deposited into the habitat bank.
- A description of how habitat credits may be withdrawn from the habitat bank and the DFO-led Indigenous consultation process associated with this withdrawal.
- An overview of VFPA's Aboriginal Consultation and Engagement Process for proposed habitat banking projects. This process demonstrates how VFPA intends to engage and consult with Indigenous groups within the identified service area and identifies how Indigenous input and knowledge will be considered throughout the project identification, development, construction and post-construction phases. Opportunities for Indigenous c (e.g. technical design review, fieldwork, monitoring, contracting, employment and training) will also be identified as well as the process for reporting back to Indigenous groups on feedback received.
- Other relevant materials (e.g. Habitat Enhancement Program presentations, project overview/information sheets, map of Habitat Enhancement Program projects, etc.).

VFPA confirmed receipt of this information by Indigenous groups through follow up communications. VFPA provided responses to any questions, comments and input from Indigenous groups received in advanced of focused information sessions.

### **3.2 Information Sessions**

Three information sessions (Lower Mainland, Vancouver Island and Fraser Valley) were arranged to provide an accessible location for participants that required minimal travel. A proposed agenda was provided in advance of these sessions for review by participants.

Key components of these information sessions:

- Presentation of the materials included in the Information Packages
- Questions from Indigenous groups and response by VFPA and DFO
- Recording of information and input received as well as concerns or issues raised by Indigenous groups

The schedule for these Information sessions was as follows:

DATE	LOCATION/VENUE
<u>Information Session No. 1</u>	Vancouver, BC

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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September 11, 2018	VFPA Office
<u>Information Session No.2</u> October 16, 2018	Brentwood Bay, BC Brentwood Bay Resort
<u>Information Session No.3</u> November 29, 2018	Chilliwack, BC People of the River Referrals Office

### 3.3 One-on-One meetings

One-on-one meetings or other types of engagement activities (e.g., presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. TWN advised VFPA that they would not participate in the VFPA/DFO engagement sessions regarding the HEP and new Habitat Bank Arrangement as they are already engaged in ongoing discussions with VFPA and DFO regarding administration of VFPA's habitat bank.

No other requests for meetings, additional information or feedback have been received to date.

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## 4. Attendance Records for Information Sessions

### Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	
Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

### Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo Sinead Deery

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

Information Session No. 3 – Chilliwack, BC (November 29, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	
Lower Fraser Fisheries Alliance	

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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## 5. Presentations & Other Materials

Presentations and other materials shared during the VFPA/DFO engagement included the following:

- Package of information and accompanying letter (August 2018)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation
  - Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a *Fisheries Act* Authorization
  - Proponent-led Habitat Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

## 6. Concerns, Issues and Input Received

Several key topics were raised during this engagement process. Input that VFPA and DFO received included the following:

### **VFPA-DFO Habitat Bank Arrangement:**

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- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation.
- Importance of ensuring that constructed project sites are protected into the future.
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required.

### **Habitat Banking (specifically):**

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects.
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact.

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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**VFPA/HEP Engagement Processes:**

- General comment that the HEP consultation is understood and has been effective.
- General support for projects built to date and consultation process undertaken by VFPA.
- Desire for Indigenous involvement in all aspects and phases of HEP projects: provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- Interest in providing input into what is monitored (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Sharing of information: collection data, monitoring data, fish use data, construction monitoring reports. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.). There is value in making information available.
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Suggestion to work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

**DFO Indigenous Consultation and Regulatory Processes:**

- General consultation concerns: adequacy of consultation at all levels of First Nations governance (for all aspects of habitat banking, including the policy itself). Suggestion that DFO consult at a higher level at First Nations' organizations.
- Concerns that DFO consultation is completed on a project by project basis – one project at a time when Authorization is sought. Importance of First Nations being informed of projects that do not get an Authorization due to impacts.
- Concern that the Crown is swayed to grant Authorizations if habitat is already banked.
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights.
- Guiding principles for offsetting should include that offsetting be done to also support First Nations cultural values.
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries.
- General perspective that habitat is not "created" but only restored; something must be displaced to create new habitat.
- There is perception that DFO approves all authorizations.
- Comment that there is a need to use Western science and Traditional Knowledge in the monitoring and evaluation of projects.
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm.

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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- Comment that First Nations do not feel properly consulted by DFO.

**General, Scientific, Technical and Cultural:**

- Request for projects to be built on the South Arm of the Fraser River and Vancouver Island.
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consideration of climate change, sea level rise and flood management in project planning.
- General interest in shellfish restoration & other food-harvest value species.
- Cultural considerations are important: intertwine legacy and cultural history into projects.
- Cultural loss of marine aquatic species (e.g., clam beds).
- Development of educational resources, including First Nations specific educational aspects and opportunities (e.g., important species, cultural history).
- Need for balance: infrastructure development and healthy environment.
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat that VFPA is enhancing.

**General state of the environment:**

- Concern regarding the inability to compensate for historic impacts / damage / destruction of environment – lack of industry accountability for historic damages / destruction of habitat.
- Need for a balance of infrastructure development and the environment.
- Concern regarding the impacts of dyking on the lower Fraser River.
- Concern regarding the impacts of fish farms.
- Importance needs to be placed on protecting native species.
- Access to and health of marine aquatic species (e.g., clam beds) for First Nations.

**Other:**

- *Fisheries Act* review comments not adequately addressed from an Indigenous perspective; comment that the review processes was too short.
- Importance of long-term foreshore management planning and VFPA support of this work and other initiatives.
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive.

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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## 7. Responses and Next Steps

### **VFPA-DFO Habitat Bank Arrangement and Habitat Banking Specifically:**

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In response to concern brought forward regarding the term "*conservation project*" in the context of habitat banking, DFO and VFPA have adopted the use of the term "*habitat banking projects*" in the Port of Vancouver Habitat Bank Arrangement, and DFO will consider the same for any future Habitat Banking Arrangements that might be proposed in the Pacific Region. In addition, this concern has been communicated to DFO staff in Ottawa that work on the development of habitat banking guidance.

Both DFO and VFPA recognize the importance of ensuring that habitat banking project sites are protected into the future. In this regard, VFPA will monitor and manage projects to meet their objectives until such a time as the credits associated with those projects are removed from the bank, and in the longer-term those sites will be subject to the protection provisions of the *Fisheries Act*.

Comments and concerns with respect to early engagement and consultation related to habitat banking are addressed by VFPA and DFO, respectively in the two sections below.

### **VFPA/HEP Engagement Processes:**

VFPA will review the Habitat Enhancement Program consultation process in light of the input received to consider opportunities to improve its effectiveness. VFPA will:

- Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including the provision of input to: project identification, collection of data, design, construction, monitoring and specifically, in goal-setting, decision-making and evaluation.
- Consider opportunities and a process for enhanced integration of Indigenous input and identification of priorities into planning for monitoring (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, and work happening by other organizations (e.g., Indigenous, NGO, governments, etc.).
- Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.

### **DFO Indigenous Consultation and Regulatory Processes:**

The Government of Canada is committed to advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, Inuit-Crown and government-to-government relationship based on the recognition of rights, respect, cooperation and partnership. Fisheries and Oceans Canada is now also in the early stages of reviewing its laws and policies and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

As outlined in DFO's "Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led Habitat Bank Arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the *Fisheries Act* or *Species at Risk Act*. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led Habitat Bank Arrangement.

DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposes to use banked habitat credits as part of an Application for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet offsetting requirements.

Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction, monitoring and evaluation of projects will be considered by DFO for any Habitat Banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

### **General, Scientific, Technical and Cultural and General state of the Environment:**

DFO and VFPA appreciate the input provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective organizations. These items and concerns will continue to be considered moving forward.

In particular, with respect to habitat banking VFPA will identify opportunities to integrate the input received, as well as the priorities and ideas raised during the engagement process. VFPA will:

- Consider producing cultural/educational materials for habitat banking projects and the Habitat Enhancement Program.
- Work with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
- Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consider opportunities (i.e., workshops and initiatives) related to shellfish restoration & other food-harvest value species.
- Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.
- Consider opportunities for DNA analysis to be undertaken on fish stocks in foreshore habitats that VFPA is enhancing.

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

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**Other:**

Comments regarding DFO's consultation process related to the review of the *Fisheries Act* have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

**8. Reporting**

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and input shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement. DFO and VFPA will:

- Share this report, along with copies of the habitat banking-related information presented during the engagement process.
- Notify Indigenous groups when a new DFO-VFPA Habitat Bank Arrangement is in place.
- Respond to any future questions or requests for information related to the DFO-VFPA Habitat Bank Arrangement.

The Habitat Enhancement Program provides for ongoing engagement and consultation which allows for continued opportunities to address any concern or issues. HEP will provide opportunities to Indigenous groups to identify and where possible, advance priority projects in collaboration with VFPA.

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## Appendices

**Appendix 01 – Information Packages Provided to Indigenous Groups**

**Appendix 02 – VFPA Presentation Material**

**Appendix 03 – DFO Presentation Material**

**Appendix 04 – DFO Frequently Asked Questions**

**Appendix 05 – Meeting Record from September 11, 2018 Information Session (Vancouver)**

**Appendix 06 – Meeting Record from October 16, 2018 Information Session (Vancouver Island)**

**Appendix 07 – Meeting Record from November 29, 2018 Information Session (Fraser Valley)**



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## HABITAT ENHANCEMENT PROGRAM 2018 HABITAT MONITORING REPORT

Submitted to:

Fisheries and Oceans Canada  
Byron Nutton, R.P.Bio.  
A/Team Lead – Partnerships, Standards & Guidelines  
Byron.Nutton@dfo-mpo.gc.ca

Submitted by:

Vancouver Fraser Port Authority

Charlotte Olson, P.Geo., PMP  
Manager, Infrastructure Habitat Development  
Habitat Enhancement Program  
Charlotte.Olson@portvancouver.com

Gord Ruffo, P.Eng.  
Senior Project Manager  
Habitat Enhancement Program  
Gord.Ruffo@portvancouver.com

Habitat Enhancement Program

February 2019

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

### Terminology Used

- **Agreement:** Reference to the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank* between Vancouver Fraser Port Authority and Fisheries and Oceans Canada dated July 31, 2012 (signed September 10, 2012).
- **DFO:** Fisheries and Oceans Canada
- **Glenrose Tidal Marsh Sites:** Glenrose Downstream Tidal Marsh, Glenrose Cannery Tidal Marsh and Gunderson Mudflat Tidal Marsh sites.
- **Habitat Bank:** Vancouver Fraser Port Authority Habitat Bank
- **HEP:** Habitat Enhancement Program
- **Legacy Habitat Banking Sites:** Gladstone Park Tidal Marsh, Riverfront Park Tidal Marsh and Timberland Basin Habitat sites
- **PCMP:** Post-Construction Monitoring Plan
- **SMR:** Salt Marsh Restoration Sites 3.1 to 3.5
- **VFPA:** Vancouver Fraser Port Authority

### Monitoring Terminology

- **Quantitative assessment:** An assessment that occurs the first year following site construction to assess baseline conditions, select transects and establish reference sites. This assessment will identify qualitative and quantitative biophysical characteristics associated with the site. The assessment will be conducted by a Qualified Environmental Professional and a Professional Engineer, as required.
- **Functionality assessments:** Assessments that occur following an initial quantitative assessment. Dependent on the site conditions, the scale of monitoring can include an assessment of various quantitative and qualitative biophysical characteristics associated with the site. Functionality assessments will occur annually until the site is determined to be stable and functioning as intended. The assessments will be conducted by a Qualified Environmental Professional and a Professional Engineer, as required.
- **Annual inspections:** Inspections that are associated with sites in the Habitat Bank for general assurance that the habitat remains functional (per *Section 3.6* and *4.2* of the Agreement). These inspections will occur following completion of the functionality assessment period. In addition, annual inspections will be required for at least one year following withdrawal of a site from the Habitat Bank to confirm habitat viability (per *Section 3.4 c*) of the Agreement).
- **Confirmatory assessment:** An assessment that is associated with a site proposed to be withdrawn from the Habitat Bank (per *Section 3.4 d*) of the Agreement). The assessment will follow established protocols from the quantitative assessment or methods established by Fisheries and Oceans Canada as a condition of Authorization.

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

### Table of Contents

<b>Terminology Used .....</b>	<b>i</b>
<b>Introduction.....</b>	<b>1</b>
<b>Types of Monitoring.....</b>	<b>1</b>
<b>2018 Monitoring Results .....</b>	<b>2</b>
Legacy Habitat Banking Sites .....	2
<i>Gladstone Park Tidal Marsh .....</i>	<i>2</i>
<i>Riverfront Park Tidal Marsh .....</i>	<i>2</i>
<i>Timberland Basin Habitat.....</i>	<i>3</i>
Salt Marsh Restoration Sites .....	3
<i>Salt Marsh Restoration Site 3.1 .....</i>	<i>3</i>
<i>Salt Marsh Restoration Site 3.2 .....</i>	<i>4</i>
<i>Salt Marsh Restoration Site 3.3 .....</i>	<i>4</i>
<i>Salt Marsh Restoration Site 3.4 .....</i>	<i>4</i>
<i>Salt Marsh Restoration Site 3.5 .....</i>	<i>4</i>
Glenrose Tidal Marsh Sites.....	4
<i>Glenrose Downstream Tidal Marsh .....</i>	<i>5</i>
<i>Glenrose Cannery Tidal Marsh .....</i>	<i>5</i>
<i>Gunderson Mudflat Tidal Marsh.....</i>	<i>5</i>
New Brighton Park Shoreline Habitat Restoration Site .....	6
<i>Salt Marsh .....</i>	<i>6</i>
<i>Tidal Mudflat.....</i>	<i>7</i>
<i>Tidal Channel .....</i>	<i>7</i>
<i>Cobble/Boulder Beach .....</i>	<i>7</i>
<i>Dune Grass.....</i>	<i>7</i>
<i>Tree/Shrub .....</i>	<i>7</i>
<b>2019 Habitat Monitoring Report.....</b>	<b>8</b>
 <b>Appendix A</b> 2018 Monitoring Reports	
 <b>Appendix B</b> Monitoring Status and Proposed Monitoring Schedule	
 <b>Appendix C</b> Habitat Enhancement Program: Post-Construction Monitoring Plan	

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

### Introduction

The Vancouver Fraser Port Authority (VFPA's) Habitat Enhancement Program (HEP) is an initiative focused on creating and enhancing fish and wildlife habitat. This proactive program is intended to provide a balance between a healthy environment and future development projects. The program is being undertaken in accordance with the *Working Agreement Concerning Procedures for the Development and Operation of the Port Metro Vancouver Habitat Bank, 2012* (the Agreement) between VFPA and Fisheries and Oceans Canada (DFO). The Agreement acknowledges the mutual benefits of habitat banking to both parties and provides guidelines for the operation of the VFPA Habitat Bank (the Habitat Bank).

This 2018 Habitat Monitoring Report is the sixth annual monitoring report prepared by VFPA's HEP and is intended to satisfy the post-construction monitoring conditions outlined in the Agreement. In accordance with the Agreement, formal post-construction monitoring was undertaken in 2018 at the 12 sites in the Habitat Bank.

The current sites in the Habitat Bank include:

- Legacy Habitat Banking Sites:
  - Gladstone Park Tidal Marsh, Fraser River North Arm, Vancouver
  - Riverfront Park Tidal Marsh, Fraser River North Arm, Vancouver
  - Timberland Basin Habitat, Fraser River, Surrey
- Salt Marsh Restoration Sites:
  - Salt Marsh Restoration Site 3.1, Roberts Bank, Delta
  - Salt Marsh Restoration Site 3.2, Roberts Bank, Delta
  - Salt Marsh Restoration Site 3.3, Boundary Bay, Delta
  - Salt Marsh Restoration Site 3.4, Boundary Bay, Delta
  - Salt Marsh Restoration Site 3.5, Boundary Bay, Delta
- Glenrose Tidal Marsh Sites:
  - Glenrose Downstream Tidal Marsh, Fraser River, Delta
  - Glenrose Cannery Tidal Marsh, Fraser River, Delta
  - Gunderson Mudflat Tidal Marsh, Fraser River, Delta
- New Brighton Park Shoreline Habitat Restoration Site, Burrard Inlet, Vancouver

This report describes the results from post-construction monitoring undertaken in 2018. The 2018 post-construction monitoring reports are included in **Appendix A**. A table depicting the monitoring status and proposed monitoring schedule for sites currently in the Habitat Bank, including any new sites proposed for addition to the Habitat Bank, has been included in **Appendix B**.

### Types of Monitoring

Sites included in the Habitat Bank are subject to post-construction monitoring to assess the development of habitats at each site, and to monitor established sites in the Habitat Bank for general assurance that the habitat is functioning as designed and intended. Although monitoring is site-specific, typical assessments include evaluations of vegetation establishment and physical stability. VFPA's goal is to provide consistent and coherent monitoring across all sites. If monitoring identifies deficiencies in site function, VFPA and DFO will mutually agree to a course of action.



## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

A Post-Construction Monitoring Plan (PCMP) was developed by VFPA to address protocols for assessing various habitat types, and it outlines how specific habitat types will be monitored in accordance with the Agreement. The PCMP was prepared and acknowledged for use by DFO in 2015, and has recently been reviewed and updated in 2018 (**Appendix C**). To distinguish between the monitoring effort proposed for sites in the Habitat Bank, the different types of monitoring have been defined (refer to the *Terminology Used* section above). Annual post-construction monitoring may include: *quantitative assessments*; *functionality assessments*; *annual inspections*; and, *confirmatory assessments*.

## 2018 Monitoring Results

As of December 2018, the Habitat Bank includes 12 habitat sites. The 2018 post-construction monitoring reports are included in **Appendix A**. A summary of the monitoring results for each site is included below.

### Legacy Habitat Banking Sites

The legacy habitat banking sites (i.e., Gladstone Park Tidal Marsh, Riverfront Park Tidal Marsh and Timberland Basin Habitat) consist of tidal marsh and mudflat benches that were constructed over 25 years ago. Based on the results of the 2018 inspections, and consistent with previous monitoring inspections, vegetation density is high at all the marsh legacy habitat banking sites. Despite the presence of non-native species (such as purple loosestrife (*Lythrum salicaria*) and narrow-leaved cattail (*Typha angustifolia*)), as is common in many marsh habitats along the lower Fraser River, the marsh and mudflat benches at these sites continue to provide quality estuarine fish rearing habitat for juvenile salmonids and other fish species, as well as habitat for wildlife.

#### **Gladstone Park Tidal Marsh**

The Gladstone Park Tidal Marsh, originally part of the North Fraser Harbour Habitat Compensation Bank, was constructed in 1993 and was transferred into the VFPA Habitat Bank in 2013. The sixth *annual inspection* of the site since its transfer into the VFPA Habitat Bank was undertaken in July 2018, approximately 25 years following construction of the site.

Conditions observed in July 2018 were largely unchanged from 2017, with the marsh bench supporting dense emergent native (e.g., Lyngbye's sedge (*Carex lyngbyei*)) and non-native (e.g., purple loosestrife) vegetation. Stranded logs were observed along most of the shoreline near the riprap berm and riverward edge of the marsh. The riprap berm appeared to be stable and, in combination with the log booms stored offshore, was providing protection from vessel-generated waves. The marsh was determined to be providing high quality estuarine habitat. Another *annual inspection* of the site is scheduled to be undertaken in 2019.

#### **Riverfront Park Tidal Marsh**

The Riverfront Park Tidal Marsh, originally part of the North Fraser Harbour Habitat Compensation Bank, was constructed in 1993 and was transferred into the VFPA Habitat Bank in 2013. The sixth *annual inspection* of the site since its transfer into the VFPA Habitat Bank was undertaken in July 2018, approximately 25 years following construction of the site.

Observations from the 2018 inspection indicate that the marsh bench is supporting dense, well-established native (e.g., Lyngbye's sedge) and some non-native (e.g., purple loosestrife, narrow-leaved cattail, and common hound's-tongue (*Cynoglossum officinale*)) vegetation. While some log recruitment was documented in the marsh, the rock berm and log booms moored offshore are mitigating impacts from vessel-generated waves, and may be reducing additional

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

log recruitment. The log booms also appeared to be assisting with the formation of a broad mudflat extending riverward from the rock berm at the site. The marsh was determined to be providing high quality estuarine habitat. Maintenance recommendations from the 2018 inspection at the site include removal of common hound's-tongue and logs from the marsh (to prevent the formation of marsh-smothering rafts). Another *annual inspection* of the site is scheduled to be undertaken in 2019.

### **Timberland Basin Habitat**

The Timberland Basin Habitat, originally part of the Fraser River Harbour Commission's Habitat Bank, was constructed in stages in the late 1980s through 1990s and was transferred into the VFPA Habitat Bank in 2014. The fifth *annual inspection* of the site since its transfer into the VFPA Habitat Bank was undertaken in July 2018, approximately 29 years following construction of the site.

The site consists of both intertidal marsh and mudflat habitats, with portions of the mudflat transitioning to low marsh. Native marsh species such as common rush (*Juncus effusus*) and water forget-me-not (*Myosotis laxa*), were present in the upper and lower marsh, respectively. Some patches of non-native purple loosestrife and yellow iris (*Iris pseudacorus*) were present in the marsh. Observations of these vegetation communities remain largely unchanged since the 2017 inspection. While logs were observed scattered throughout the upper marsh, the site and riprap berm were physically stable and well sheltered from vessel-generated waves originating in the Fraser River navigational channel. Based on the 2018 inspection, the Timberland Habitat site is providing high quality estuarine habitat. Another *annual inspection* at the site is scheduled to be undertaken in 2019.

### **Salt Marsh Restoration Sites**

Restoration of the salt marsh sites at Roberts Bank and Boundary Bay (i.e., Salt Marsh Restoration (SMR) Sites 3.1 to 3.5) was completed between fall 2013 and the winter of 2013-14. A fifth post-construction assessment, and fourth *functionality assessment*, of each site was undertaken in August 2018. Prior to the summer assessment, the sites were surveyed to document log recruitment in April and May 2018.

While gradual recruitment of logs is likely to continue at the SMR sites that are not sheltered by a dike (i.e., SMR Sites 3.2 to 3.5), the results of monitoring indicate that SMR Sites 3.1, 3.4, and 3.5 are functioning as intended and are showing improved fish habitat function compared to pre-construction conditions. It is recommended that monitoring efforts for subsequent years at these SMR sites transition to *annual inspections* for general assurance that the habitat remains functional. Due to the dynamic environment and recent shift in the vegetation composition at SMR Site 3.2, and the declining vegetation coverage at SMR Site 3.3, another *functionality assessment* at both sites is recommended in 2019.

#### **Salt Marsh Restoration Site 3.1**

SMR Site 3.1 was established by VFPA's HEP in March 2013 with additional log removal work undertaken in October 2013. As the site is largely protected from the influx of logs and woody debris by a storm surge dike, log recruitment has not been observed at this site since it was restored in 2013. Observations from 2018 confirm dense marsh vegetation coverage across the site. Compared to 2017, coverage of invasive English cordgrass (*Spartina anglica*) had increased at the site; however, these plants were subsequently treated with herbicide administered by the BC Spartina Working Group in coordination with TFN-Matcon in September 2018. While the presence of English cordgrass will continue to be monitored (with treatment prescribed as required), the results of the 2018 assessment indicate that the restoration area is functioning as intended. The first *annual inspection* at the site is scheduled to be undertaken in 2019.

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

### **Salt Marsh Restoration Site 3.2**

SMR Site 3.2 was established by VFPA's HEP in January 2014. Observations from the 2018 assessment indicate that vegetation coverage and species diversity has increased at the site. A shift in the vegetation community was also documented at the site with a greater composition of marsh species favouring higher elevations and/or disturbed areas. However, consistent with observations from 2017, an accumulation of logs was observed along the shoreline, with scattering of wood debris throughout the marsh. Although a sand-gravel berm has formed near the shoreline, marsh vegetation has begun to colonize this berm. While this site is providing fish habitat, another *functionality assessment* at the site is recommended in 2019 due to the dynamic environment and recent shift in the vegetation community.

### **Salt Marsh Restoration Site 3.3**

SMR Site 3.3 was established by VFPA's HEP in September 2013. Based on observations throughout the post-construction monitoring period, marsh vegetation coverage has shown a gradual decline at the site since 2015. These observations are correlated with increasing log accumulations that have formed throughout the restoration site. While this site is providing fish habitat, another *functionality assessment* at the site is recommended in 2019 due to the declining vegetation coverage.

### **Salt Marsh Restoration Site 3.4**

SMR Site 3.4 was established by VFPA's HEP in September 2013. Observations from 2018 confirm dense vegetation growth in the high marsh, with recolonization of localized unvegetated areas occurring in the lower marsh. Despite the recruitment of new logs, good overall marsh vegetation coverage was observed at the site, and the restoration area is considered to be functioning as intended. The first *annual inspection* at the site is scheduled to be undertaken in 2019.

### **Salt Marsh Restoration Site 3.5**

SMR Site 3.5 was established by VFPA's HEP in September 2013. Observations from 2018 confirm dense vegetation growth throughout the marsh, with recolonization occurring in some of the low elevation depressions observed during previous monitoring years. Despite the recruitment of new logs, there was good overall marsh vegetation coverage at the site, and the restoration area is considered to be functioning as intended. The first *annual inspection* at the site is scheduled to be undertaken in 2019.

## **Glenrose Tidal Marsh Sites**

The Glenrose Tidal Marsh sites (Glenrose Downstream, Glenrose Cannery and Gunderson Mudflat) were constructed by VFPA's HEP in the spring/summer of 2014 and were initially planted in the late summer of 2014. The fourth post-construction assessment, and third *functionality assessment*, of each site was undertaken in July and August 2018.

Overall, monitoring indicates that the constructed habitats are providing improved fish habitat functionality (e.g., improved feeding, rearing and cover areas for juvenile salmonids) over pre-construction conditions. However, early colonization of some of the marsh areas by non-native purple loosestrife was noted. To limit competition and allow the native marsh time to establish, removal of purple loosestrife is recommended as part of the annual maintenance program in 2019. The Glenrose Downstream Tidal Marsh site is functioning as intended and it is recommended that monitoring efforts for subsequent years at this site transition to *annual inspections* for general assurance that the habitat remains functional. Due to a mixture of the dynamic fluvial conditions and/or influences of heavy geese grazing at the Glenrose Cannery

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

and Gunderson Mudflat Tidal Marsh sites, another *functionality assessment* at both sites is recommended in 2019.

### **Glenrose Downstream Tidal Marsh**

Consistent with observations from last year, vegetation establishment is dense across the Glenrose Downstream Tidal Marsh site. The marsh appears to have reached a stable vegetation community with similar plant density and diversity to its mature reference marsh. While some stranded logs were observed in and along the marsh, most of the logs appeared to be transient. The rock berm and shoreline armouring were observed to be stable and functioning as intended.

Based on the results of the assessment from 2018, the Glenrose Downstream Tidal Marsh is providing suitable conditions for marsh establishment and functioning as high-quality habitat for fish and wildlife. The first *annual inspection* at the site is scheduled to be undertaken in 2019.

### **Glenrose Cannery Tidal Marsh**

The Glenrose Cannery Tidal Marsh consists of a marsh bench downstream (Cannery West), and a marsh bench upstream (Cannery East) of the former cannery building. Consistent with observations from 2015 to 2017, the 2018 monitoring indicated that the Cannery West marsh bench has retained more dredged material (used as marsh substrate fill in project construction) and supports higher plant coverage in comparison to the Cannery East bench. A net improvement in marsh coverage was noted at the Cannery West bench. However, the Cannery East bench consists of predominantly bare rock substrate and appears to be more exposed and experiences more scouring than the Cannery West bench. Overall marsh coverage at the Cannery East bench was lower compared to data from 2017. Despite the relatively low coverage in some areas, diversity across the Glenrose Cannery Tidal Marsh was relatively high with 25 vegetation species documented.

The marsh bench is narrow across the site and susceptible to erosion from vessel-generated waves, and drifting logs; however, the protective riprap berm is stable and functioning as designed. These marsh benches are still providing ecological functions for fish, including feeding and rearing areas for juvenile salmon. As the habitat productivity along portions of the Glenrose Cannery Tidal Marsh site is limited by poor vegetation coverage, which reduces inputs to the detrital-based food web, another *functionality assessment* at the site is recommended in 2019.

### **Gunderson Mudflat Tidal Marsh**

Observations from 2018 indicate that marsh vegetation is present across most of the Gunderson Mudflat Tidal Marsh site. Dense marsh vegetation, with similar diversity to its reference marsh, is present in fenced enclosures and in the interior of the marsh, with approximately 70% of the sampled quadrats having dense or moderately dense coverage. Natural seed recruitment from adjacent habitat (e.g., from tapered rush (*Juncus articulatus*) and common water starwort (*Callitriche stagnalis*)) is increasing vegetation density and expansion of vegetation coverage at the site. However, marsh vegetation coverage is still low in some areas, particularly near the lower downstream edge of the marsh. Grazing of marsh plants by Canada geese (*Branta canadensis*) continues to reduce establishment of marsh vegetation at this site.

Similar to maintenance and replanting activities undertaken at the Gunderson Mudflat Tidal Marsh site between 2015 and 2017, new marsh plugs were installed at the site in April 2018. Marsh plugs were installed at a density of 4 plugs/m<sup>2</sup> within four new geese exclusion enclosures designed using natural fabric (i.e., coir, jute, and burlap). However, the fabric fencing failed due to the strong river current and tidal action and was unsuccessful in preventing geese access. Despite the low density of marsh within the new enclosures, the enclosures appear to have

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

assisted with increasing marsh vegetation coverage behind the structures by dampening energy from vessel-generated waves. To date, it appears that plastic fence enclosures have been the most effective in preventing grazing of marsh plugs by Canada geese.

In addition to installation of new marsh plugs in the marsh, coir matting, willow stakes, and marsh plugs were installed in April 2018 with the assistance of BCIT/SFU students, near the Nelson View Creek tidal channel to mitigate erosion and migration of the channel towards the marsh. Based on observations from July 2018, the marsh plugs did not survive at this location (possibly due to the low elevation), while the willow has survived but may be stressed (i.e., leaf growth is limited to the top of the planted stakes). Surveys of the tidal channel in August 2018 indicate that the erosion fabric installed on the channel bed has remained in place with sediment accumulation observed above the fabric. Inspections in 2019 will confirm if the fabric remains in place during higher winter flows.

The sand-gravel berm at the riverward edge of the marsh was observed to have migrated further into the marsh with sand-gravel covering two enclosures that were installed at the site in 2016. Despite the migration of the berm towards the marsh, marsh vegetation was observed to be colonizing the top of the berm due to the dispersion of the sand-gravel material. In spite of the impacts from heavy grazing by Canada geese and the shoreward migration of the protective sand-gravel berm, the constructed marsh contributes to the detrital-based food web and is providing rearing and feeding areas for fish and wildlife. Given the dynamic environment and impacts from geese grazing, another *functionality assessment* is recommended in 2019.

### New Brighton Park Shoreline Habitat Restoration Site

The New Brighton Park Shoreline Habitat Restoration Site was constructed by VFPA's HEP in partnership with the Vancouver Board of Parks and Recreation, including collaboration with the Musqueam, Squamish and Tsleil-Waututh First Nations. The project converted a historically infilled upland site into productive fish and wildlife habitat. Salt marsh, tidal mudflat, tidal channel, cobble/boulder beach, dune grass meadow and tree/shrub habitats were developed at the site. Construction of, and planting at, the site was completed in spring/summer 2017 and an As-Built Report was issued in 2017. The first post-construction assessment (i.e., a *quantitative assessment*) was undertaken at the site in August 2018.

The assessment confirms that the site is already providing significantly higher fish habitat value compared with pre-construction conditions. A more detailed description of the existing conditions of the different habitat types at the site from 2018 are provided in the subsections below. VFPA will continue the assessment of the created habitat types during the second year of the formal post-construction monitoring program (i.e., via *functionality assessments*) in 2019.

#### **Salt Marsh**

The salt marsh habitat is intended to support emergent plants for the benefit of fish and wildlife species. To protect the marsh plugs from Canada geese grazing, fencing was installed at the site in 2017 with supplemental planting conducted in May 2018 to install saltgrass (*Distichlis spicata*) and arrowgrass (*Triglochin maritima*) plugs that were not available from the nursery in 2017. Vegetation monitoring from August 2018 indicates that there is vegetation coverage across the salt marsh, with pickleweed (*Sarcocornia pacifica*) and saltgrass dominating the species composition in the low and high marsh, respectively. After only two growing seasons (i.e., summer of 2017 and 2018) the salt marsh appears to be establishing well. Species diversity at the site was also similar to its mature reference marsh at the Maplewood Flats, although the reference site at Maplewood supported invasive seacoast cordgrass (*Spartina patens*) and the non-native mud rush (*Juncus gerardii*).

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

### ***Tidal Mudflat***

The tidal mudflat habitat is located between approximately 0.0 and 1.0 metres chart datum, and it is intended to support benthic algal and infaunal invertebrate communities. Observations from August 2018 indicate that the upper ends of the mudflat are being colonized by salt marsh species including pickleweed, and benthic algal colonization is occurring in some areas of the mudflat. Some localized areas of bank erosion were observed in sections of the mudflat. Stability of the habitat will continue to be assessed throughout the post-construction monitoring period to determine whether remedial measures are required. Despite the localized erosion, the mudflat is providing fisheries benefits.

### ***Tidal Channel***

The tidal channel was designed to pool water during low tide and provide refuge for marine fish and invertebrate species. Evidence of use of the site by green shore crabs burrowing in the banks was noted during the post-construction assessment. Juvenile salmon were also documented using the tidal channel habitat in May 2018. While there are areas of localized erosion along the tidal channel, observations from August 2018 generally indicate that the tidal channel is providing habitat for fish and invertebrates, as well as birds and other wildlife. This channel is considered to be functioning as intended.

### ***Cobble/Boulder Beach***

Constructed cobble and boulder habitat is located at the two tidal channel outlets. Cobble, boulder, and gravel substrates were placed at the outlets to prevent scouring and erosion, but also to provide attachment sites for marine vegetation and invertebrates.

Observations from 2018 indicate that the substrates are more mobile near the west tidal channel outlet (where sand and gravel substrates were observed to have accumulated) because the outlet is located in a more exposed area of Burrard Inlet.

The east tidal channel outlet provides lower elevation access from Burrard Inlet and is located within a more sheltered embayment. Sea lettuce (e.g., *Ulva lactuca*) and other macroalgae were colonizing the cobble and boulder substrates, and benthic algae and diatoms were present on the lower rock armouring. The east tidal channel outlet also had some localized patches of thin armouring. However, generally observations indicate that this habitat is functioning as intended.

### ***Dune Grass***

Dunegrass meadow habitat provides marine backshore vegetation function, including wildlife cover, wave energy absorption, and food production. The dunegrass (*Leymus mollis*) installed at the site has established well; however, observations of survival by other beach meadow species (such as yarrow (*Achillea millefolium*), beach pea (*Lathyrus japonicus*) and seaside lupine (*Lupinus littoralis*)) was lower, potentially due to competition by hydroseeded grasses. These areas will continue to be monitored in 2019.

### ***Tree/Shrub***

Trees and shrubs support backshore and riparian functions including providing of cover, temperature regulation, soil stabilization and food production. Native trees and shrubs were planted in the backshore areas above the dunegrass habitat in 2017. However, relatively high mortality of the planted vegetation was recorded due to the very warm temperatures and low precipitation experienced at the site during summer 2017 and 2018, combined with potential competition from the hydroseeded grasses. To address this relatively high mortality rate, another inspection of the site is recommended in spring 2019, with replanting of appropriate species recommended to occur, as required, during fall 2019.

## VANCOUVER FRASER PORT AUTHORITY | 2018 Habitat Monitoring Report

### 2019 Habitat Monitoring Report

It is anticipated that the 2019 Habitat Monitoring Report will include the following post-construction monitoring reports:

- Gladstone Park Tidal Marsh - Year 26: *Annual inspection*
- Riverfront Park Tidal Marsh - Year 26: *Annual inspection*
- Timberland Basin Habitat - Year 30: *Annual inspection*
- Salt Marsh Restoration Site 3.1 - Year 6: *Annual inspection*
- Salt Marsh Restoration Site 3.2 - Year 6: *Functionality assessment*
- Salt Marsh Restoration Site 3.3 - Year 6: *Functionality assessment*
- Salt Marsh Restoration Site 3.4 - Year 6: *Annual inspection*
- Salt Marsh Restoration Site 3.5 - Year 6: *Annual inspection*
- Glenrose Downstream Tidal Marsh - Year 5: *Annual inspection*
- Glenrose Cannery Tidal Marsh - Year 5: *Functionality assessment*
- Gunderson Mudflat Tidal Marsh - Year 5: *Functionality assessment*
- New Brighton Park Shoreline Habitat Restoration - Year 2: *Functionality assessment*

Additionally, any habitat targeted for withdrawal in 2019 will be subject to a *confirmatory assessment*. A table depicting the monitoring status and proposed monitoring schedule for sites currently in the Habitat Bank, including any new sites proposed for addition to the Habitat Bank, has been included in **Appendix B**.

## **Appendix A**

### **2018 Monitoring Reports**

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**GL Williams  
& Associates Ltd.**

Coastal and Estuarine Habitat

2907 Silver Lake Place  
Coquitlam BC V3C 6A2

T 604.941.7541  
C 604.377.7089  
E glwill@telus.net

**MEMO**

**FILE NO.:** GW1801-01A  
**DATE:** October 19, 2018  
**TO:** [REDACTED] Moffatt & Nichol  
**FROM:** [REDACTED]  
**SUBJECT:** 2018 Inspection of Legacy Site Gladstone and Riverfront Park Tidal Marshes

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The 2018 site inspections of the Vancouver Fraser Port Authority's (VFPA) Legacy intertidal marshes at Gladstone and Riverfront Parks on the North Arm of the Fraser River were conducted at low tide on July 23 for biological assessment by [REDACTED] GL Williams & Associates, and August 15 for engineering assessment by [REDACTED] Moffatt and Nichol. Like previous years, the assessments were limited to visual observations and photo-documentation. An annual inspection of the Legacy Sites is required under the Habitat Enhancement Program Post-Construction Monitoring Plan (PCMP) submitted by VFPA to Fisheries and Oceans Canada in March 2015.

**Gladstone Park Tidal Marsh**

The constructed Gladstone Park tidal marsh is a mature intertidal marsh supporting a dense vegetation community that includes Lyngbye's sedge (*Carex lyngbyei*), softstem bulrush (*Schoenoplectus tabernaemontani*), several species of rush (*Juncus* spp.), spike rush (*Eleocharis palustris*), as well as native common cattail (*Typha latifolia*) and non-native narrowleaf cattail (*Typha angustifolia*) (Photo 1). The marsh is protected from river currents and vessel generated waves by logbooms that are stored within the waterlots leased as part of the Fraser River forestry operations (Photo 2). During the July inspections at low tide, mudflat habitat has formed at the base of the outer rock containment berm (see Photo 1). Stranded anthropogenic and natural logs, including portions of trees, were observed within the marsh along most of the shoreline (Photos 3 and 4).

Purple loosestrife (*Lythrum salicaria*) is the most common invasive occurring in the marsh (Photo 5), while invasive knotweed and blackberry are common within the riparian zone. Most of the invasive species, such as purple loosestrife, are common within marsh habitats situated along the North Arm of the Fraser River.

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Narrowleaf cattail (Photo 6), a non-native species, appears to be a more recent species addition to the marsh community and was not recorded in the post-construction monitoring conducted in the 1990's. It was known to be part of the marsh flora in the lower reaches of the estuary (e.g. Musqueam Marsh) and appears to have expanded its range upstream. It may provide similar habitat attributes to the native common cattail and is not as detrimental as purple loosestrife and other invasive species that do not provide fish and wildlife support to the emergent marsh ecological services and functions.

The rock riprap containment berm appears to be stable and in combination with the log booms moored offshore, are providing protection from vessel-generated waves (Photo 7). No evidence of loss of marsh bench material through erosion was observed. In contrast, the downstream end of the marsh, the majority of which is in the City Vancouver fire ramp compensation area and not in the VFPA site, does not have logbooms fronting the shoreline and vegetation has not established as well (Photo 8).

The biological observations from 2018 confirm that the Gladstone marsh is providing high quality estuarine fish rearing habitat for juvenile salmonids and other fish species that utilize the North Arm of the Fraser River, as well as resident and migratory water birds.

#### **Riverfront Tidal Marsh**

Similar to the constructed Gladstone Park intertidal marsh, the Riverfront Park tidal marsh is a mature emergent marsh supporting a diverse vegetation community (Photos 9 and 10). Native species include Lyngbye's sedge, common cattail, softstem bulrush, spike rush, and several species of rush. Non-native species include invasive purple loosestrife, water forget-me-not (*Myosotis scorpioides*), and narrowleaf cattail. Cattail continues to increase coverage (Photo 11), and particularly along the outer edge of the marsh where emergent vegetation was not as dense (Photo 12). It also appears to be outcompeting other species in the interior of the marsh as well. Reasons for this include sediment accretion, which favours cattail establishment, as well as hybridization of the exotic narrow-leaved cattail with the native common cattail.

Purple loosestrife occurs throughout the Riverfront marsh (Photo 13). Common houndstongue (*Cynoglossum officinale*), which was first observed in the marsh in 2017, now consists of approximately six plants and has only slightly increased its area of coverage (Photo 14). Common houndstongue is a European plant species that is usually found in terrestrial habitats, so the intertidal conditions may not favour rapid expansion. It is recommended that the houndstongue be removed before it becomes more prevalent in the Riverfront marsh.

Log accumulation was observed throughout the marsh, but several of the larger logs are stable and add to the structural complexity of the marsh habitat for fish and wildlife (Photo 15). In several areas of higher elevation close to the boardwalk, logs are becoming concentrated and appear to be forming rafts that may eventually reduce marsh productivity (Photo 16). VFPA may want to consider removing log accumulations that are impacting marsh functions at the earliest opportunity.



The rock berm and log booms moored offshore are protecting marsh from vessel-generated waves (Photo 17). They have created low energy conditions for sediments to accrete and form a broad mudflat extending from the toe of the rock berm almost out to the log booms (Photo 18). The mudflat provides additional value to the marsh habitat by adding shallow water habitat for estuarine infauna and productive rearing habitat for juvenile salmonids and other fish species.

The 2018 inspection confirms that the constructed Riverfront marsh habitat is providing high quality fish habitat for rearing juvenile fishes, such as juvenile salmonids, as well as birds and wildlife. Cattail is becoming more prevalent, but the plant species diversity remains high, comprised of native and non-native species. Like the Gladstone marsh, purple loosestrife is the most frequently observed invasive species. The created habitat continues to provide a wide range of ecological services that support fish and wildlife habitat.

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## July 2018 Photos

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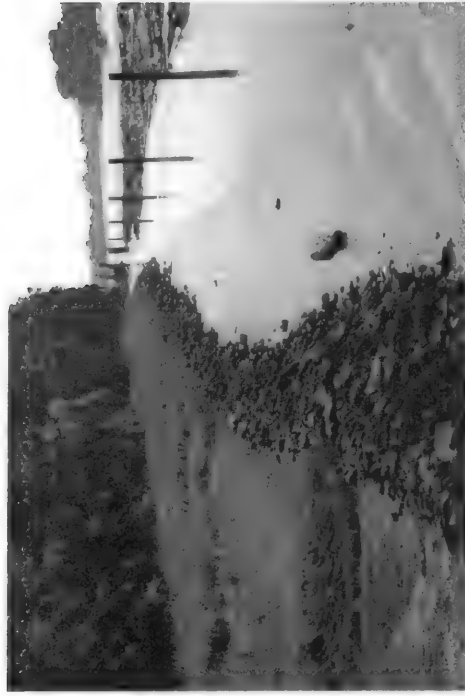


Photo 1. Gladstone upstream marsh on July 23 observed from the observation pier looking upstream.

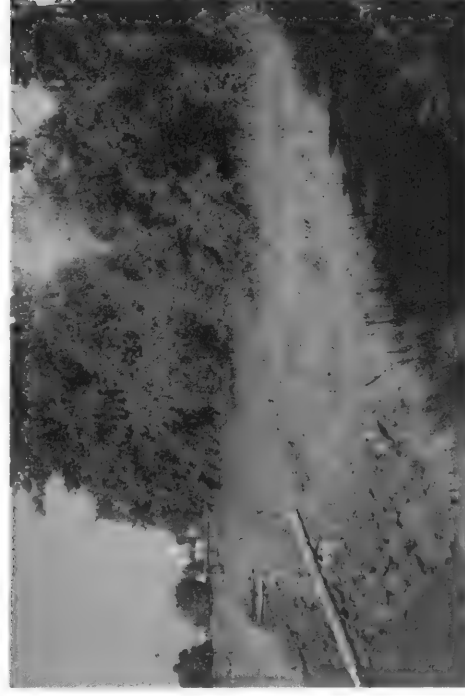


Photo 2. Gladstone upstream marsh viewed from park shoreline.



Photo 3. Logs stranded along the shoreline in the Gladstone marsh.



Photo 4. Large tree observed in the Gladstone marsh.



Photo 5. Invasive purple loosestrife is common in Gladstone marsh.

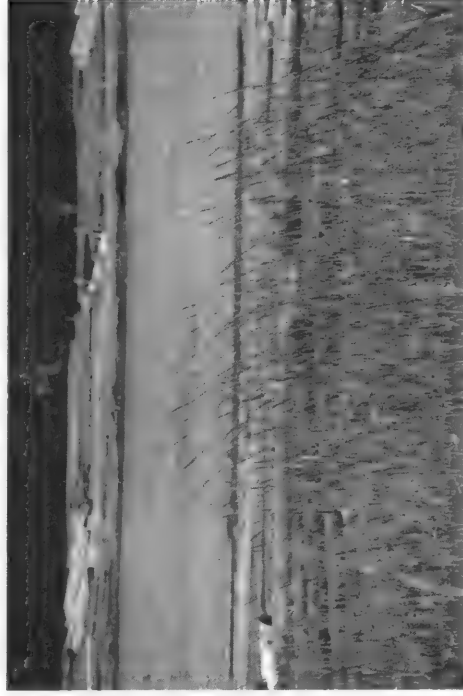


Photo 6. Stand of narrow-leaved cattail in Gladstone marsh.

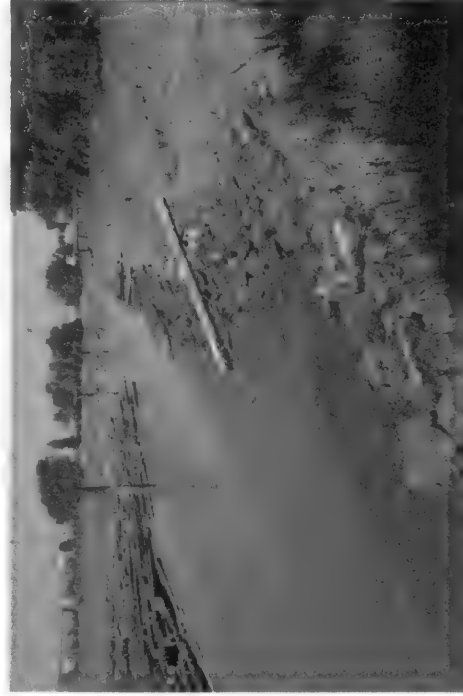


Photo 7. Gladstone marsh design includes rip rap containment berm and offshore logs booms to provide protection.

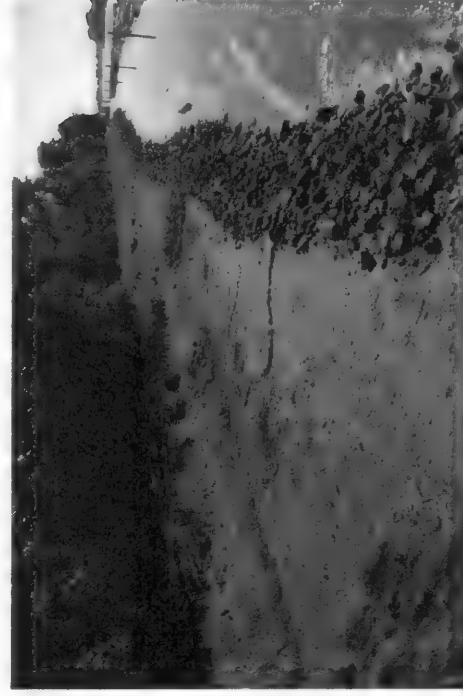


Photo 8. Downstream end of marsh, on City of Vancouver land, is not protected by logbooms and has sparse vegetation.

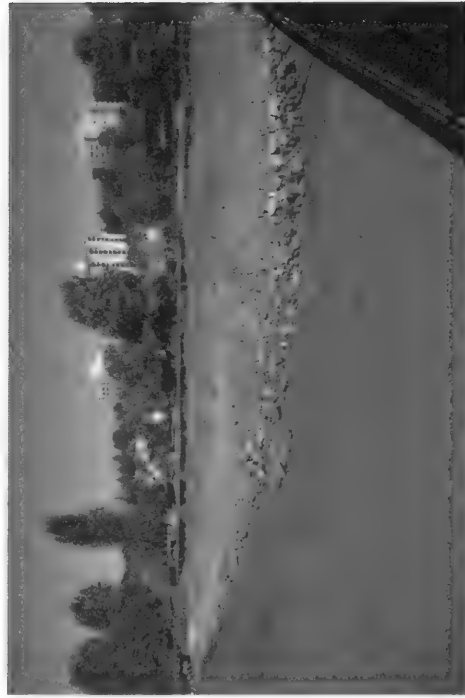


Photo 9. Riverfront marsh surrounded by piers and shoreline boardwalk.



Photo 10. Riverfront marsh observed from the downstream pier.



Photo 11. Cattail is especially prevalent in the Riverfront marsh.



Photo 12. Dense cattail now occurs along the Riverfront marsh edge.



Photo 13. Invasive purple loosestrife is prevalent in Riverfront marsh.



Photo 14. Common houndstongue in Riverfront marsh.



Photo 15. Stable large logs provide fish and wildlife habitat.



Photo 16. Log accumulation at Riverfront marsh in 2018.



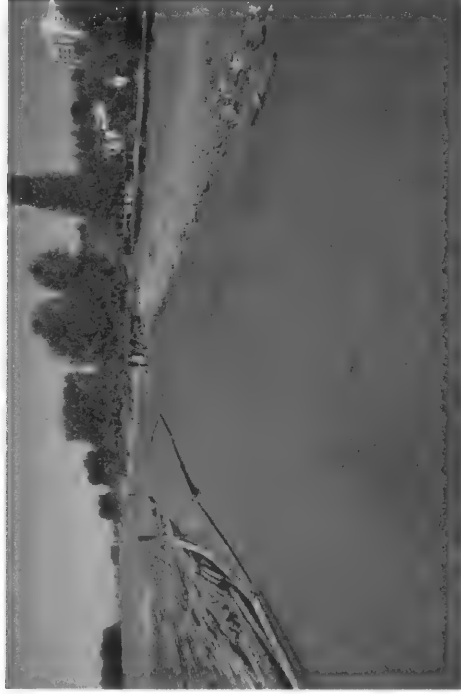


Photo 17. Riverfront marsh features productive mudflat habitat between the marsh and logboom.



Photo 18. Stable rip rap containment berm is functioning as intended at Riverfront marsh.

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**GL Williams  
& Associates Ltd.**

Coastal and Estuarine Habitat

2907 Silver Lake Place  
Coquitlam BC V3C 6A2

T 604.941.7541  
C 604.377.7089  
E glwill@telus.net

MEMO

**FILE No.:** GW1801-01A  
**DATE:** October 19, 2018  
**TO:** [REDACTED] Moffatt & Nichol  
**FROM:** [REDACTED]  
**SUBJECT:** 2018 Monitoring of Timberland Basin Habitat

The 2018 monitoring of Vancouver Fraser Port Authority's (VFPA) Timberland Basin Legacy Habitat Site located in Surrey on the Main Arm of the Fraser River included a biological assessment at low tide on July 23 by [REDACTED] GL Williams & Associates, and engineering assessment on August 15 by [REDACTED] Moffatt and Nichol. Like previous years, the assessments were limited to visual observations and photo-documentation. An annual inspection of the Legacy Site is required under the Habitat Enhancement Program Post-Construction Monitoring Plan (PCMP) submitted by VFPA to Fisheries and Oceans Canada in March 2015.

Biological conditions remained largely unchanged from 2017, with the Timberland site consisting of taller, emergent species in the upper elevations above approximately 0.8 m geodetic datum (GD) along the training wall (Photo 1) and shorter species colonizing the former unvegetated mudflat between 0.1 m and 0.7 m GD elevations (Photo 2).

The upper marsh is dominated by native species such common rush (*Juncus effusus*) and woolgrass (*Scirpus cyperinus*), and invasive species purple loosestrife (*Lythrum salicaria*) and yellow flag (*Iris pseudacorus*). Purple loosestrife and yellow flag have formed dense communities (Photo 3). Other observed species included Pacific silverweed (*Potentilla anserina*) creeping bentgrass (*Agrostis stolonifera*), Baltic rush (*Juncus arcticus*), non-native water forget-me-not (*Myosotis scorpioides*), native small water forget-me-not (*Myosotis laxa*), birdsfoot trefoil (*Lotus corniculatis*), ovoid spikerush (*Eleocharis obtusa*), and northern bugleweed (*Lycopus uniflorus*). Logs were observed scattered in the upper marsh. Invasive species are particularly dominant in the upper marsh.

The low marsh supported dense coverage of shorter species dominated by water forget-me-not and water purslane (*Ludwigia palustris*). Other marsh plant species observed included mudwort (*Limosella aquatica*), lilaeopsis (*Lilaeopsis occidentalis*), pygmyweed (*Crassula aquatica*), ovoid spikerush, water plantain (*Alisma trivale*) and water-starwort, (*Callitriche stagnalis*). Invasive purple loosestrife and yellow flag are also spreading into the lower marsh.



The low marsh vegetation is patchy, with open areas of mudflat (Photo 4). The observations from 2018 do not show a marked improvement or expansion of the vegetation communities within the low marsh compared to 2017. The site is heavily used by Canada geese (Photo 5) and the heavy geese grazing pressure is probably having a detrimental effect on vegetation establishment, especially on native emergent plants like sedge and other more desirable species.

The site is physically stable, being well sheltered from vessel generated waves originating in the South Arm navigation channel. This is illustrated by the small diameter rock riprap containment berm that continues to protect the marsh and appears to be functioning as designed (Photo 6).

Based on the 2018 assessment, the Timberland habitat is providing emergent marsh fish habitat for juvenile salmonids and other fish species, as well as waterfowl and other wildlife species.

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## July 2018 Photos

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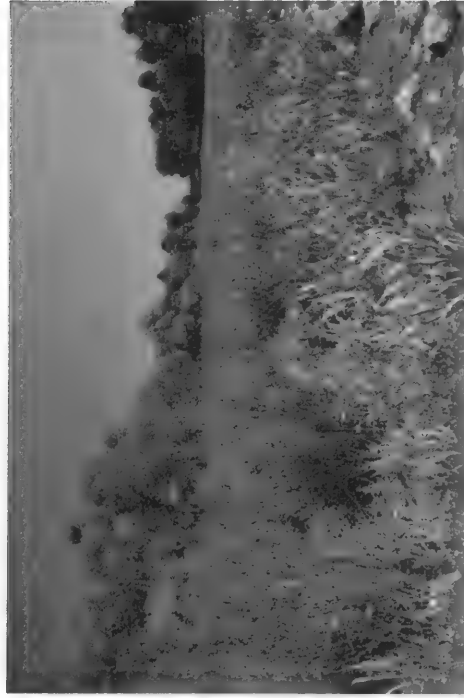


Photo 1. Constructed upper marsh habitat site within Timberland Basin

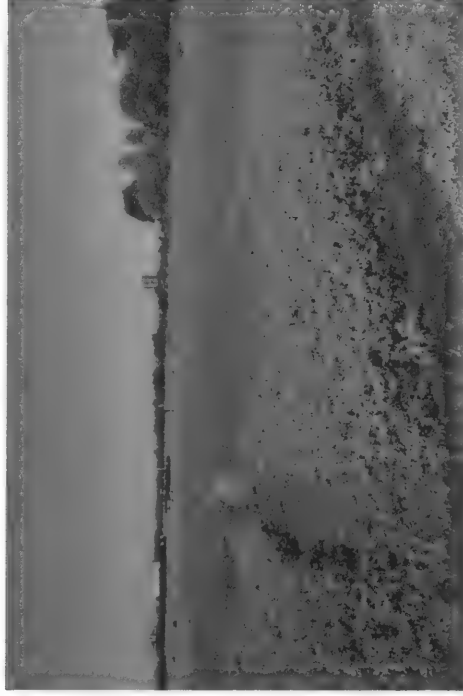


Photo 2. High marsh emergent vegetation at Timberland site

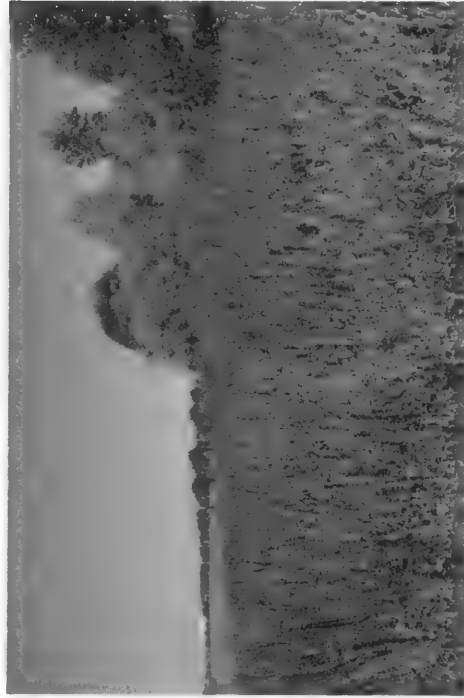


Photo 3. Dense low marsh community covers former mudflat

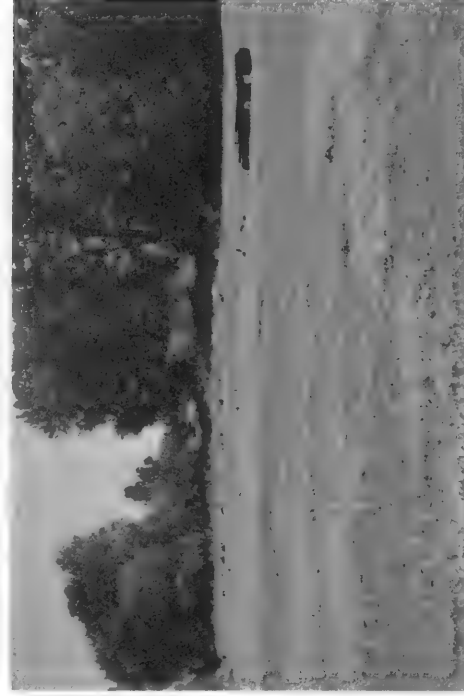


Photo 4. Riprap containment berm along west bench boundary

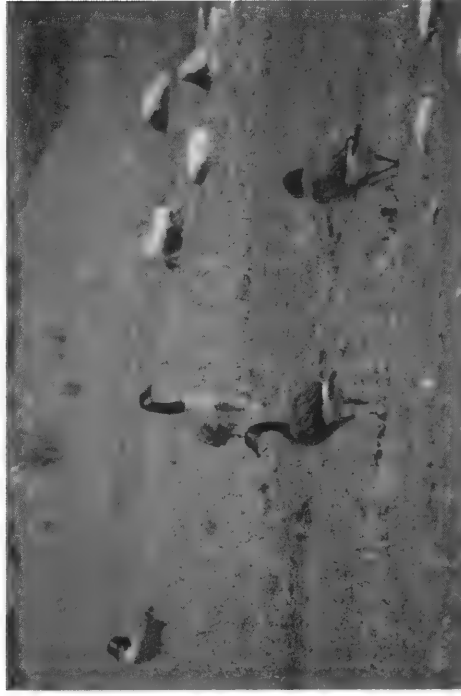


Photo 5. Canada geese grazing at Timberland.

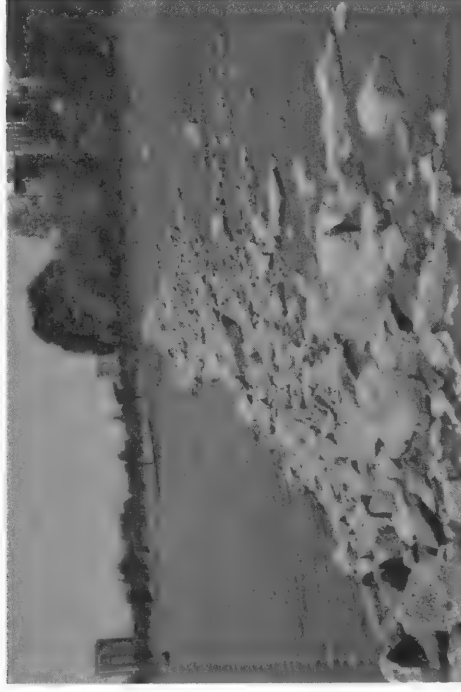


Photo 6. Rock riprap containment berm at Timberland site.



**VANCOUVER FRASER PORT AUTHORITY  
HABITAT ENHANCEMENT PROGRAM  
SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING  
FINAL REPORT**

**FEBRUARY 7, 2019**



**GL Williams  
& Associates Ltd.**



**moffatt & nichol**

# **VANCOUVER FRASER PORT AUTHORITY**

## **HABITAT ENHANCEMENT PROGRAM**

### **SALT MARSH RESTORATION SITES**

#### **FIFTH YEAR MONITORING**

#### **FINAL REPORT**

**Prepared for:** Vancouver Fraser Port Authority  
Habitat Enhancement Program  
100 The Pointe, 999 Canada Place  
Vancouver, BC Canada  
V6C 3T4

**Prepared by:** [REDACTED]  
GL Williams & Associates Ltd.  
2907 Silver Lake Place  
Coquitlam, B.C.  
V3C 6A2

[REDACTED]  
Moffatt & Nichol  
301-777 W. Broadway  
Vancouver, BC  
V5Z 4J7

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FEBRUARY 7, 2019



## TABLE OF CONTENTS

1.0 Introduction .....	1
2.0 Monitoring Program Methods .....	3
2.1 Marsh Vegetation .....	3
2.2 Log Survey .....	3
3.0 Results .....	5
3.1 Site 3.1 .....	5
3.2 Site 3.2 .....	9
3.3 Site 3.3 .....	13
3.4 Site 3.4 .....	17
3.5 Site 3.5 .....	21
4.0 Summary and Recommendations.....	25
5.0 Literature Cited.....	27

## LIST OF TABLES

Table 1	Site 3.1 Frequency of occurrence (%) of marsh species in quadrats. ....	8
Table 2	Site 3.2 Frequency of occurrence (%) of marsh species in quadrats. ....	12
Table 3	Site 3.3 Frequency of occurrence (%) of marsh species in quadrats. ....	16
Table 4	Site 3.4 Frequency of occurrence (%) of marsh species in quadrats. ....	20
Table 5	Site 3.5 Frequency of occurrence (%) of marsh species in quadrats. ....	24
Table 6	Recommended 2019 monitoring activities for Sites 3.1 to 3.5. ....	26

## LIST OF FIGURES

Figure 1	Location of Salt Marsh restoration sites on Roberts Bank (Sites 3.1 and 3.2) and Boundary Bay (Sites 3.3 to 3.5) in Delta. ....	2
Figure 2	Site 3.1 Salt marsh plant coverage trends from 2014 to 2018. ....	7
Figure 3	Site 3.2 Salt marsh plant coverage trends from 2014 to 2018. ....	11
Figure 4	Site 3.3 Salt marsh plant coverage trends from 2014 to 2018. ....	15
Figure 5	Site 3.4 Salt marsh plant coverage trend from 2014 to 2018. ....	19
Figure 6	Site 3.5 Salt marsh plant coverage trends from 2014 to 2018. ....	23

## APPENDICES

A – Site Drawings.....	28
B – Intertidal Salt Marsh 2018 Vegetation Data.....	35
C – April and May 2018 Marsh Restoration Sites Wood Debris Accumulation Maps. ....	40

## **1.0 INTRODUCTION**

In 2018, the monitoring program continued for Vancouver Fraser Port Authority's (VFPA) Salt Marsh Restoration Sites 3.1 to 3.5 as required by the Habitat Enhancement Program (HEP) Post-Construction Monitoring Plan (PCMP) submitted by VFPA to Fisheries and Oceans Canada (DFO) in March 2015. The Salt Marsh Restoration Sites are part of VFPA's HEP that was initiated in 2012 with DFO through the signing of the **Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank**. The agreement builds on previous port habitat banking efforts conducted in the Fraser River estuary to create, restore, and enhance fish habitat for offsetting future impacts from development projects.

The VFPA Salt Marsh Restoration includes five marsh sites in Boundary Bay and Roberts (**Figure 1**):

- 3.1, Tsawwassen salt marsh adjacent the Tsawwassen First Nation sewage treatment plant;
- 3.2, Roberts Bank Intercauseway area between the dike and Roberts Bank causeway;
- 3.3, Boundary Bay at the foot of 64<sup>th</sup> Street;
- 3.4, Boundary Bay at 64<sup>th</sup> Street East, between 64<sup>th</sup> and 72 Streets; and
- 3.5, Boundary Bay at the foot of 72<sup>nd</sup> Street.

Post-construction detailed annual monitoring was conducted in 2014 (Williams and Davis 2014), 2015 (Williams 2015) and 2016 (Williams 2016). The fourth year annual monitoring was limited to an assessment of log accumulations in May 2017 (Williams and Tranmer 2017) and a visual inspection of vegetation establishment in September 2017 (Williams 2017). The 2018 detailed marsh assessment was conducted by [REDACTED] GL Williams and Associates Ltd., and [REDACTED] Moffatt and Nichol, accompanied by [REDACTED] Van Bower Construction Services, to survey locations and elevations using an RTK GPS. This report provides the results of the 2018 program, reviews trends over the five years of post-construction monitoring, and includes a summary of the data collected and photo-documentation of the observations at the five sites. Based on these cumulative results, recommendations are provided on focusing future monitoring effort.

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**Figure 1** Location of Salt Marsh restoration sites on Roberts Bank (Sites 3.1 and 3.2) and Boundary Bay (Sites 3.3 to 3.5) in Delta.  
(Source: 2012 aerial base map from Deltamap)

## **2.0 MONITORING PROGRAM METHODS**

The 2018 VFPA HEP monitoring program included a spring survey of log accumulation at Sites 3.1, 3.2, and 3.3 on April 30 and Sites 3.4 and 3.5 on May 1, and a detailed summer vegetation, engineering, and topographic survey conducted on August 8 and 9 at all five sites.

### **2.1 MARSH VEGETATION**

The marsh vegetation survey was conducted by [REDACTED] GL Williams & Associates Ltd. at Sites 3.1, 3.2., and 3.3 on August 8, 2018, and at Sites 3.4 and Sites 3.5 on August 9. The transects and quadrats established in 2014 (Williams and Davis 2014) were located and elevations surveyed by [REDACTED] Van Bower Construction Services using an RTK GPS to provide accurate spatial location and elevation data. A Trimble SPS 985 Precision GPS rover using Cernet RTK corrections was used, with an approximate accuracy of 0.02 m vertical and 0.01 m horizontal. Maps for each of the five marsh restoration sites, showing transect and quadrat locations and elevations, are presented in **Appendix A**.

Marsh vegetation coverage was assessed using 1-m<sup>2</sup> quadrats in the log removal and adjacent undisturbed reference marsh areas. At each survey and reference location, plant coverage within the 1-m<sup>2</sup> quadrat was estimated according to a modified Braun-Blanquet method consisting of five classes of cover: class 5 = 76-100 %; class 4 = 51-75 %, class 3 = 26-50 %, class 2 = 5-25 %, and class 1= <5 %. Species identification followed Hitchcock *et al.* (1984), using the updated taxonomy of Kozloff (2005). Each quadrat and incidental observations were documented using a Nikon D7000 digital camera equipped with an 18-300 mm zoom lens. This protocol has been developed by GL Williams & Associates and used to assess numerous DFO-authorized marsh habitat projects. The data obtained effectively illustrate vegetation establishment and project compliance. The 2018 vegetation data for each site are shown in **Appendix B**.

### **2.2 LOG SURVEY**

The salt marsh restoration sites were surveyed to categorize the nature and extent of wood debris accumulation by [REDACTED] GL Williams & Associates and [REDACTED] Van Bower Construction Services. Salt marsh restoration sites 3.1, 3.2, and 3.3 were surveyed on April 30, 2018 and sites 3.4 and 3.5 surveyed on May 1.

Log and wood debris accumulations were classified according to the criteria established in 2015 and mapped as polygons using a Trimble RTK GPS. During the field survey, the upper limit of wood debris distribution along the dike and lower distribution in the salt marsh were delineated with the GPS unit to provide the spatial location and tidal elevation range for each polygon. Site observations were photo-documented using a Nikon D7000 digital camera equipped with an 18-300 mm zoom lens.

The log accumulations were classified according to the following criteria:

- Light – logs and wood debris are present, but marsh vegetation coverage is not or only slightly inhibited, and salt marsh ecological functions are largely maintained;
- Medium – some marsh vegetation coverage is restricted but vegetation may grow around or in between logs and wood debris that occurs in denser accumulations and ecological functions are reduced;
- Heavy – log and wood debris accumulation are dense, eliminating and preventing vegetation coverage and severely impairing salt marsh ecological functions.

A map was prepared for each site to show the log accumulations recorded in 2018 overlaid on a 2013 aerial photo showing the original log coverage. The border of the log removal area was drawn on the map to show the relative extent of log recruitment within each site. Maps for each site are presented in **Appendix C**.

### 3.0 RESULTS

#### 3.1 SITE 3.1

The marsh restoration at Site 3.1, located behind the Tsawwassen First Nation sewage treatment plant (STP) and along Tsawwassen Drive (**Appendix A, Drawing 6020**), included removal of logs from 300 m of shoreline and excavation of narrow tidal channels to promote tidal flushing and improve drainage within the restored area extending up to 60 m from the dike. Re-accumulation of logs and wood debris has not occurred at the restored site.

Logs were not observed within the restored marsh on August 8, 2018, and vegetation was re-establishing well. The area behind the sewage treatment plant, one of the former areas of heaviest log accumulation, had dense vegetation coverage (**Photo 1**), as did the restored area along Tsawwassen Drive (**Photo 2**). One of the most serious vegetative factors observed during monitoring was the presence of invasive English cordgrass (*Spartina anglica*) within the low marsh. The invasive salt marsh plant English cordgrass (*Spartina anglica*), initially recorded in 2016, had increased the area of coverage within the restored marsh (**Photo 3**). Vegetation coverage was dense in the reference marsh (**Photo 4; Appendix B, Table B-2**).

At the request of VFPA, [REDACTED] met with [REDACTED] Matcon Civil Constructors Inc., at the site on September 7, 2018 to conduct a reconnaissance of the *Spartina* infestation. This led to the herbicide treatment of existing plants in late September as part of the BC *Spartina* Treatment Plan administered by the Herbicide Technical Committee of the BC *Spartina* Working Group [REDACTED] Ducks Unlimited Canada, personal communication). Habitat features constructed as part of the marsh restoration were functioning well. The wildlife logs installed during the marsh restoration were still in place and providing perches for raptors. The small tidal channels that were excavated to improve drainage were functioning as designed.

Vegetation coverage was dense (i.e. 100%) in all quadrats sampled in August 2018 (**Figure 2; Appendix B, Table B-1**). Pickleweed and saltgrass were the most frequently recorded species within the restored salt marsh, especially in the area behind the STP (**Table 1; Appendix B, Table B-1**). Along Tsawwassen Drive, spike bentgrass also was a dominant species, (**Table 1; Appendix B, Table B-1**). The reference marsh was dominated by the perennial salt marsh species pickleweed and saltgrass, (**Table 1; Appendix B, Table B-2**). The restored marsh supported 12 plant species compared with 6 in the reference marsh. Wood debris was not recorded in any of the restored marsh quadrats.

Surface elevations surveyed in August 2018 (**Appendix A, Drawing 6020**) show areas adjacent to the STP ranged from 1.2 – 1.5 m GD, while elevations along Tsawwassen Drive ranged from 1.4 m – 1.8 m GD. The reference marsh elevations ranged from 1.3 m – 1.4 m GD. The elevation data confirm that most of the restored site is low marsh that is inundated more frequently than the high marsh along Tsawwassen Drive.

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

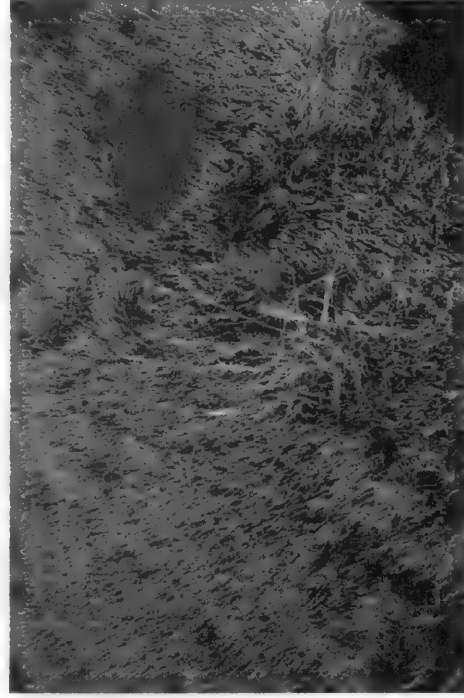
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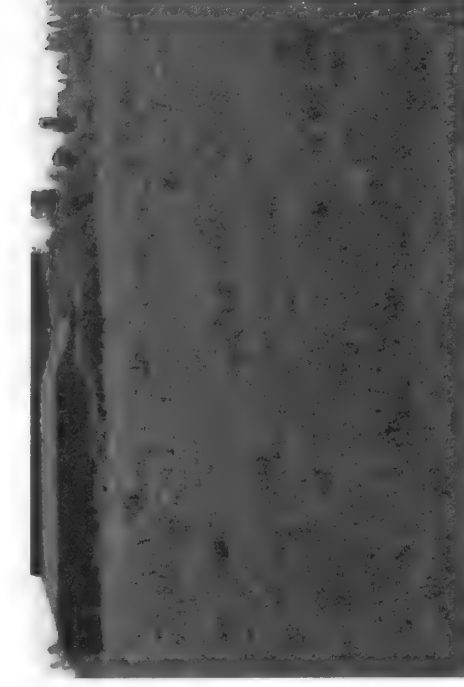
**Photo 1. Log removal area behind sewage treatment plant.**



**Photo 2. Log removal area along Tsawwassen Drive.**



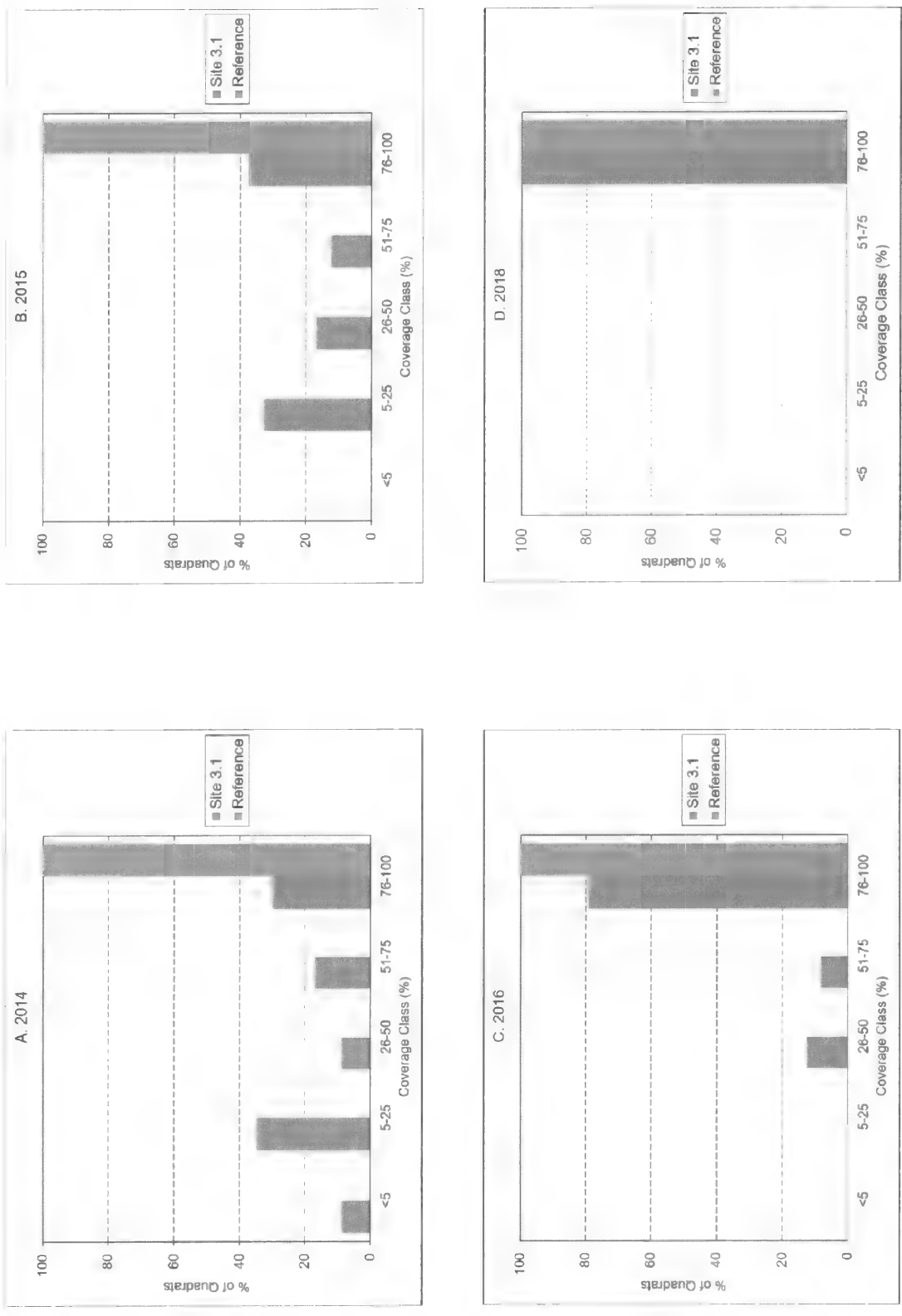
**Photo 3. Invasive English cordgrass along tidal channel.**



**Photo 4. Dense salt marsh in reference marsh.**

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



**Figure 2 Site 3.1 Salt marsh plant coverage trends from 2014 to 2018.**



**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**

**Table 1 Site 3.1 Frequency of occurrence (%) of marsh species in quadrats.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Site 3.1	Reference
<i>Achillea millefolium</i>	yarrow	5	
<i>Agrostis exarata</i>	spike bentgrass	46	
<i>Atriplex patula</i>	orache	13	33
<i>Cuscuta salina</i>	saltmarsh dodder		17
<i>Deschampsia caespitosa</i>	tufted hairgrass	13	
<i>Distichlis spicata</i>	saltgrass	67	92
<i>Grindelia integrifolia</i>	gumweed	29	17
<i>Hordeum jubatum.</i>	foxtail barley	5	
<i>Rosa nutkana</i>	Nootka rose	8	
<i>Rumex acetosella.</i>	sheep sorrel	8	
<i>Sarcocornia pacifica</i>	pickleweed	54	100
<i>Spartina anglica</i>	English cordgrass	8	
<i>Symphyotrichum subspicatum</i>	Douglas' aster	13	
	uniden. herb		17
<b>Total Species</b>		<b>12</b>	<b>6</b>

### 3.2 SITE 3.2

Marsh restoration Site 3.2 is an open, intertidal area located in the northwest corner of the intercauseway bounded by the Roberts Bank causeway and the Delta dike (**Appendix A, Drawing 6021**). The restored marsh shoreline length is approximately 225 m and 45 m wide and is fully exposed to the offshore physical processes affecting the intercauseway area.

In August 2018, there was a trend of increased vegetation coverage overall from 2015 (**Photo 5**), but the restoration site was affected by the evolution of the sand-gravel berm (**Photo 6**), influx of logs along the shore (**Photo 7**), and heavy accumulation of logs closer to the dike at higher elevations than the restoration area (**Photo 8**). These observations indicate that coastal processes are very active at the site.

The 2018 vegetation data show that vegetation establishment improved within the restored marsh, with approximately 70% of the quadrats showing dense coverage and 24% showing moderately dense coverage (**Figure 3; Appendix B, Table B-3**). The vegetation coverage in the reference marsh showed improved coverage in the sparse to moderately dense coverage (**Figure 3; Appendix B, Table B-4**). Most of the quadrats contained logs. This data demonstrates the response of vegetation to the physical processes, e.g. active sediment transport, higher energy wave climate, and effects of log transport into the site.

In 2018, there was a change in the vegetation community recorded in 2016. Species diversity increased to 18 in 2018 (**Table 2**) compared to 13 in 2016, and the three most frequently recorded species in 2018 included silver burweed, scentless mayweed (a new species for the site), perennial sow-thistle, orache, and yarrow (**Table 2, Appendix B, Table B-3**), compared to orache, silver burweed, dunegrass and sweet clover in 2016. Many of these species colonize the higher elevations (e.g. sand-marsh berm) or are opportunistic species that grow in disturbed sites. Wood debris was frequently recorded (57%) in the restored marsh quadrats (**Appendix B, Table B-3**), while logs were present in most of the reference marsh (**Appendix B, Table B-4**).

The August 2018 elevations show that the salt marsh restoration area ranges from about 1.6 m to 1.8 m GD, which is just below the HHWLT elevation of 1.8 m GD (**Appendix A, Drawing 6021**). The gravel berm crest elevation ranges from about 1.8 m to 2.4 m GD. This zone is now being colonized by silver burweed, dunegrass, sweet clover, and gumweed, which are high marsh or dune species. The reference marsh, located north of the restoration marsh site, ranges in elevation from 1.3 m to 1.8 m GD. The line of logs along the shore was deposited from 1.5 m to 1.8 m GD and provide sources for new log recruitment into the salt marsh during winter storms. Based on observations from the August 2018 surveys, most of the logs have been transported into the marsh up to and above HHWLT and accumulated north of the restoration area (**Appendix C, Drawing 6071**).

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



**Photo 5. Restored salt marsh along shoreline.**



**Photo 6. High marsh plants colonizing sand - gravel berm.**



**Photo 7. New log recruitment along lower edge of marsh.**



**Photo 8. Reference marsh area with heavy log accumulation.**

SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT

FINAL  
FEBRUARY 7, 2019

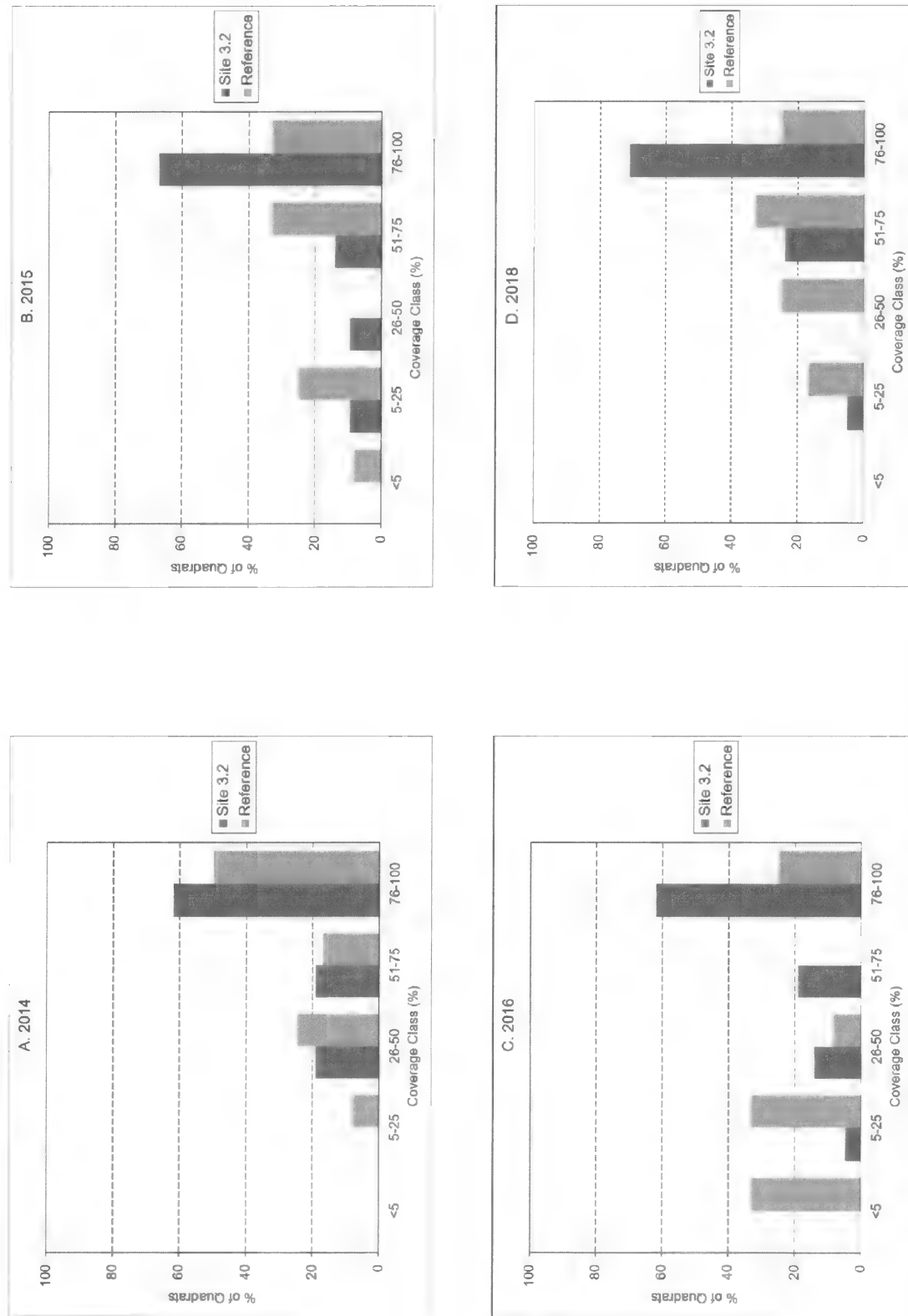


Figure 3 Site 3.2 Salt marsh plant coverage trends from 2014 to 2018.

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**

**Table 2 Site 3.2 Frequency of occurrence (%) of marsh species in quadrats.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Site 3.1	Reference
<i>Achillea millefolium</i>	yarrow	33	
<i>Alcea rosea</i>	hollyhock	5	
<i>Ambrosia chamissonis</i>	silver burweed	52	8
<i>Atriplex patula</i>	orache	43	75
<i>Cakile eduntula</i>	sea-rocket	20	33
<i>Distichlis spicata</i>	saltgrass	5	17
<i>Epilobium ciliatum</i>	Watson willowherb	10	33
<i>Grindelia integrifolia</i>	gumweed	14	8
<i>Lepidium virginicum</i>	Virginia peppergrass	20	25
<i>Leymus mollis</i>	dunegrass	20	33
<i>Melilotus alba</i>	sweet clover	24	
<i>Tripleurospermum inodorum</i>	scentless mayweed	43	50
<i>Rumex acetosella</i>	sheep sorrel	5	8
<i>Rumex crispus</i>	curley dock	5	
<i>Sarcocornia pacifica</i>	pickleweed	5	25
<i>Sonchus arvensis</i>	perennial sow-thistle	43	50
<i>Typha</i> sp.			8
	uniden. grass	5	
	uniden. herb	5	8
Total Species		18	14

### **3.3 SITE 3.3**

Marsh restoration Site 3.3 is located within an embayment along the Delta Sea Dike at the foot of 64<sup>th</sup> Street (**Appendix A, Drawing 6022**). The restoration area extended approximately 550 m along the shore and up to 60 m seaward of the dike, with reference marshes selected at the western and eastern ends. Log accumulation observed in April 2018 was extensive and covered a substantial area of the restoration marsh (**Appendix C, Drawing 6072**).

In August 2018, there were more logs observed in the restored salt marsh east (**Photo 9**) and west (**Photo 10**) of 64<sup>th</sup> Street and along the dike (**Photo 11**) than 2016. The reference marsh sites were selected in uncleared areas along the dike at the east and west ends of the restoration area (**Photo 12**).

The marsh vegetation coverage was reduced in 2018 compared to 2016 with less than 60% of the quadrats having dense coverage and over 20% having only moderate (**Figure 4; Appendix B, Table B-5**). The decreasing coverage trend began after reaching dense coverage in 2015 (**Table 4**). The influx of logs also reduced coverage in the reference marsh (**Figure 4; Appendix B, Table B-6**).

Total number of species recorded in 2018 was 12 in the restored marsh and 15 in the reference marshes (**Table 3**). Saltgrass, orache, and Douglas' aster, were the three most frequently recorded species in the restored marsh. Douglas' aster, yarrow, and grasses were most frequently recorded in the reference marsh, which are all typical species of the high marsh. Wood was recorded in most of the restored and reference marsh quadrats.

The 2018 spring log accumulation survey conducted on April 30 documented the dense log accumulation in the northern 60% of the shoreline within the restored marsh and medium accumulation in the remainder (**Appendix C, Drawing 6072**). By August most of the logs in the restored marsh were concentrated closer to the dike and present in the inner most quadrats sampled at the site.

The restored marsh at Site 3.3 occurs between HHWMT and HHWLT, with elevations ranging from 1.3 m to 1.9 m GD, (**Appendix A, Drawing 6022**). Reference marsh elevations ranged from 1.7 m to 2.7 m GD, which would only be inundated during large tide events.

**SALT MARSH RESTORATION SITE  
FIFTH YEAR MONITORING REPORT**

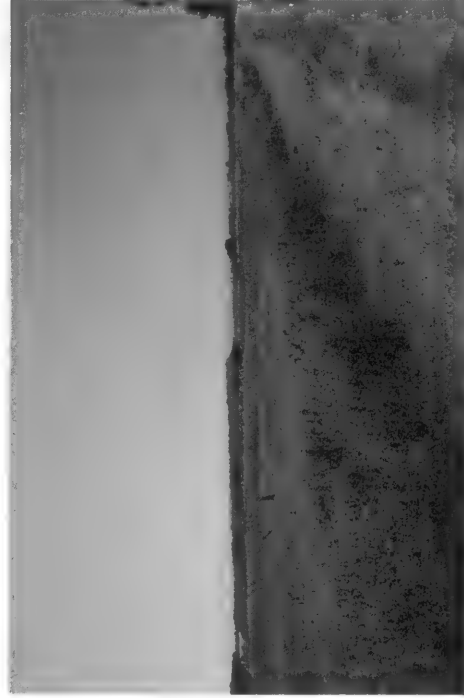
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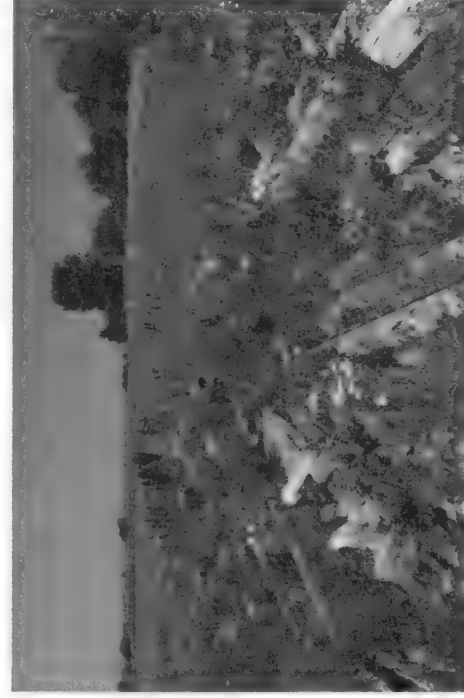
**Photo 9. Recruited logs within east restored salt marsh.**



**Photo 10. Recruited logs along west restored marsh.**



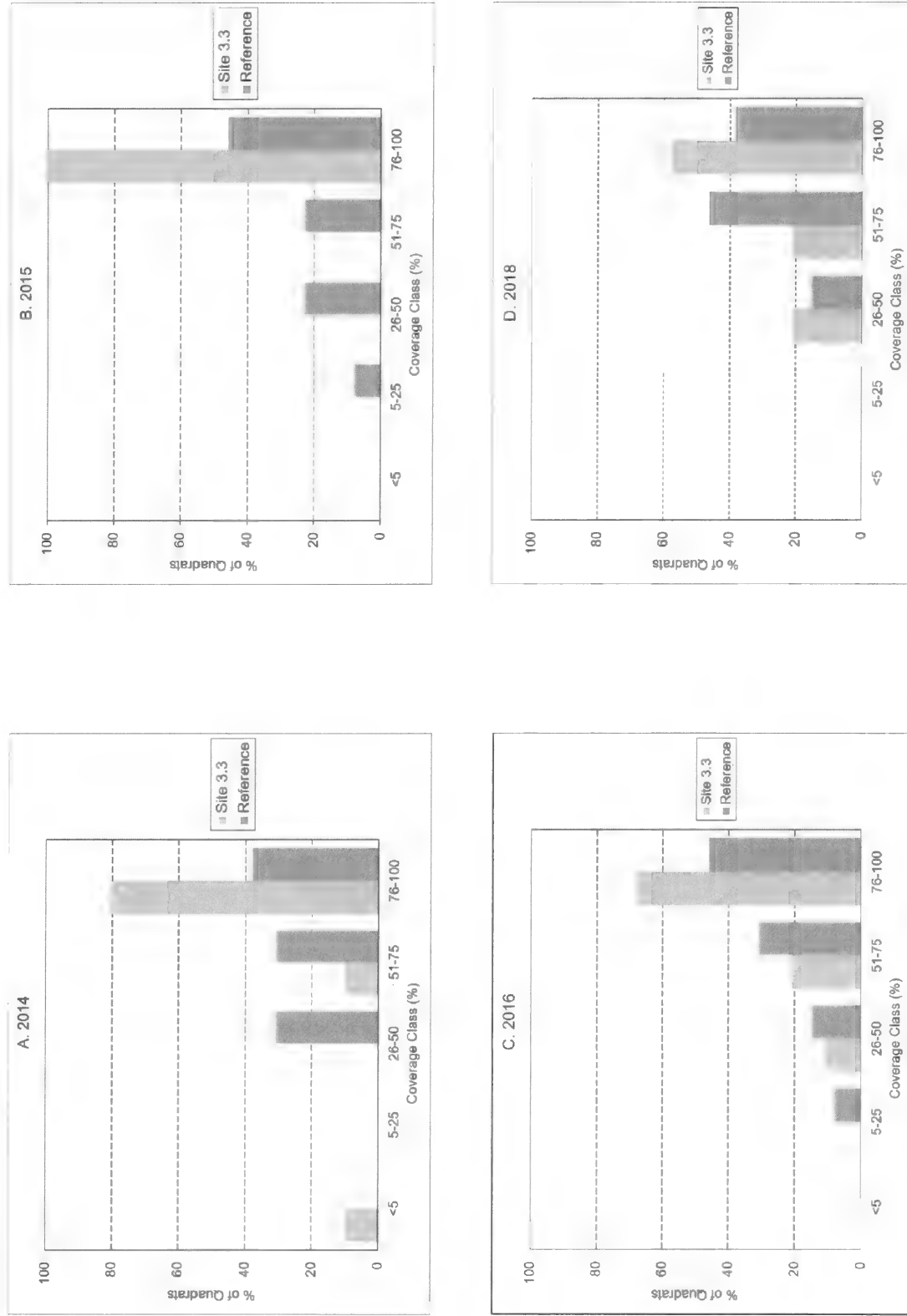
**Photo 11. Logs accumulated in upper marsh adjacent dike.**



**Photo 12. Reference salt marsh east of Site 3.3.**

**SALT MARSH RESTORATION SITE  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



**Figure 4** Site 3.3 Salt marsh plant coverage trends from 2014 to 2018.



**SALT MARSH RESTORATION SITE  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**

**Table 3 Site 3.3 Frequency of occurrence (%) of marsh species in quadrats.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Site 3.1	Reference
<i>Achillea millefolium</i>	yarrow	32	62
<i>Agrostis exarata</i>	spike bentgrass	63	31
<i>Angelica lucida</i>	sea watch	5	
<i>Atriplex patula</i>	orache	32	8
<i>Distichlis spicata</i>	saltgrass	79	8
<i>Epilobium ciliatum</i>	Watson's willowherb		8
<i>Grindelia integrifolia</i>	gumweed	5	
<i>Hordeum jubatum</i>	foxtail barley		
<i>Juncus arcticus</i>	Baltic rush		8
<i>Lathyrus japonicus</i>	sweet pea	5	
<i>Leymus mollis</i>	dunegrass		23
<i>Potentilla anserina</i>	Pacific silverweed		8
<i>Rubus discolor</i>	Himalayan blackberry		8
<i>Rumex crispus</i>	curled dock	5	
<i>Rumex sp.</i>	dock		
<i>Sarcocornia pacifica</i>	pickleweed	5	
<i>Solidago canadensis</i>	goldenrod		15
<i>Sonchus arvensis</i>	perennial sow-thistle	5	8
<i>Symphyotrichum subspicatum</i>	Douglas' aster	58	85
<i>Tripleurospermum inodorum</i>	scentless mayweed	22	8
<i>Vicia sp.</i>	vetch		31
	uniden. grass		38
	uniden. herb		
<b>Total Species</b>		<b>12</b>	<b>15</b>

### 3.4 SITE 3.4

Marsh restoration Site 3.4, located west of 72<sup>nd</sup> Street in Boundary Bay, extends approximately 540 m along the dike with a maximum width of 50 m (**Appendix A, Drawing 6023**). In the May 2018 log accumulation survey, the restoration site was impacted by a heavy log accumulation in the centre of the embayment and with medium accumulations along the east and west sections (**Appendix C, Drawing 6073**).

Logs were concentrated close to the dike and only the inner most quadrats were impacted by logs and wood debris (**Photo 13**). The restored high marsh also had dense coverage of high marsh species, which were taller and hid the stranded logs (**Photo 14**). In the central embayment, low marsh vegetation was recolonizing the open bare areas (**Photo 15**). The reference marsh, which included uncleared areas at the eastern and western ends of the restored marsh, supported dense vegetation and medium to heavy log accumulation (**Photo 16**).

Vegetation coverage improved in 2018 over 2016, and dense coverage increased to 71% and moderately dense coverage increased to 18% (**Figure 5; Appendix B, Table B-7**). The vegetation coverage increased in 2018 with 71% of the sampled quadrats having dense coverage and 18% having moderately dense coverage (**Figure 5; Appendix B, Table B-7**). The reference marsh showed an increase as well, with 83% of the quadrats having dense coverage in 2018 compared with 75% in (**Figure 5, Appendix B, Table B-8**).

In 2018, the restored marsh supported 20 species compared with 12 in the reference marshes (**Table 4**). The most frequently recorded species in the restoration marsh included yarrow, Douglas' aster, orache, and saltgrass (**Table 4; Appendix B, Table B-7**). Pickleweed and saltgrass, both typical halophytes of the salt marsh, dominated the flora in the lower, central embayment area. In the eastern and western sections of the restoration area, high marsh species were most frequently recorded, such as yarrow, Douglas' aster and goldenrod (**Table 2; Appendix B, Table B-8**). Wood debris was observed in approximately half of the restored marsh quadrats and most of the reference marshes (**Table 4; Appendix B, Tables B-7 and B-8**).

The restoration marsh included central embayment low marsh, ranging from 1.1 m to 1.7 m GD and high marsh ranging from 1.6 m to 2.3 m GD based on elevations surveyed in August 2018 (**Appendix A, Drawing 6073**). Bare soil areas were being recolonized by pickleweed. Reference marsh elevations ranged from 1.6 m to 2.1 m GD at the eastern and western ends of the site, and 1.1 m to 1.4 m GD for the central, low marsh area.

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

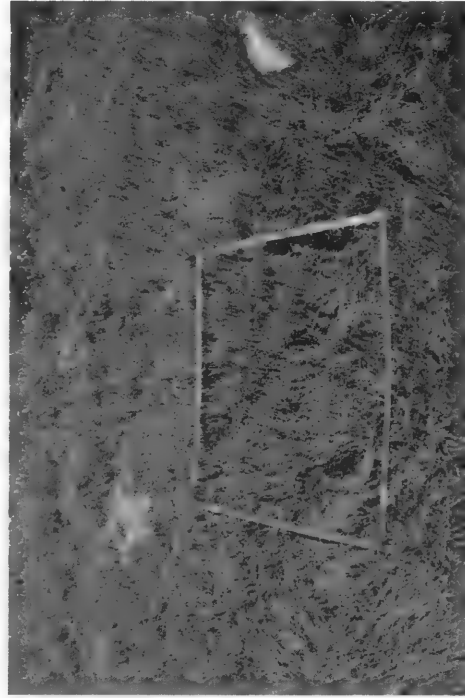
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FEBRUARY 7, 2019**



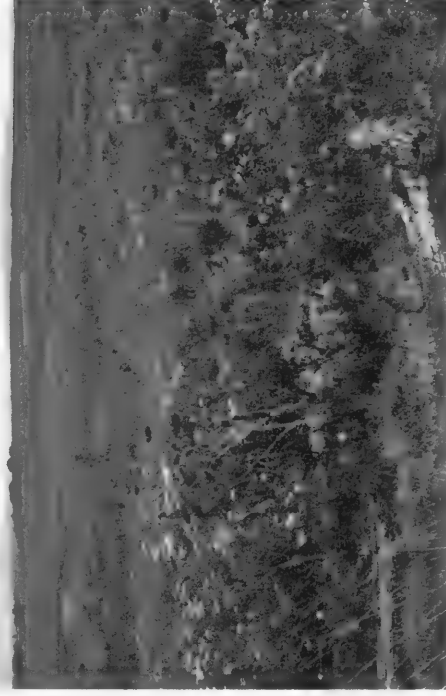
**Photo 13. Embayment of marsh restoration Site 3.4.**



**Photo 14. Thick tall marsh vegetation along dike.**



**Photo 15. Low marsh in restored area being recolonized.**



**Photo 16. West reference marsh with accumulated logs.**

SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT

FINAL  
FEBRUARY 7, 2019

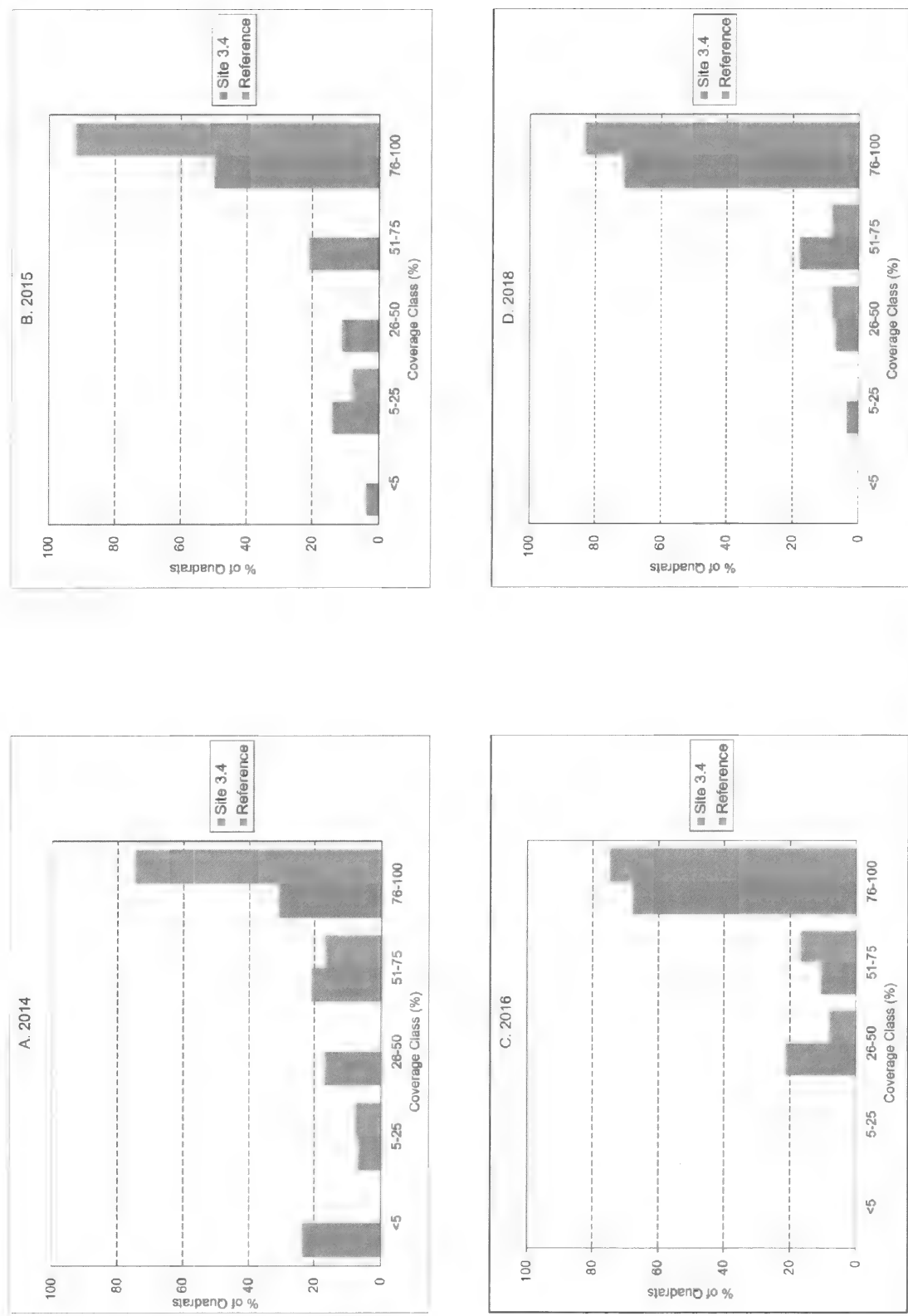


Figure 5 Site 3.4 Salt marsh plant coverage trend from 2014 to 2018.

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**

**Table 4 Site 3.4 Frequency of occurrence (%) of marsh species in quadrats.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Site 3.1	Reference
<i>Achillea millefolium</i>	yarrow	50	42
<i>Agrostis exarata</i>	spike bentgrass		8
<i>Ambrosia chamissonis</i>	silver burweed	4	
<i>Angelica lucida</i>	sea-watch	4	17
<i>Atriplex patula</i>	orache	36	25
<i>Cuscuta salina</i>	saltmarsh dodder	7	
<i>Distichlis spicata</i>	saltgrass	36	33
<i>Grindelia integrifolia</i>	gumweed	11	
<i>Hordeum</i> sp.	foxtail barley	4	
<i>Juncus arcticus</i>	Baltic rush	4	
<i>Lepidium virginicum</i>	peppergrass	4	
<i>Leymus mollis</i>	dunegrass	11	25
<i>Rumex acetosella</i>	sheep sorrel	4	8
<i>Sarcocornia pacifica</i>	pickleweed	32	58
<i>Solidago canadensis</i>	goldenrod	21	17
<i>Sonchus arvensis</i>	perennial sow-thistle	14	8
<i>Symphotrichum subspicatum</i>	Douglas' aster	36	33
<i>Tripleurospermum inodorum</i>	scentless mayweed	4	
<i>Vicia</i> sp.	vetch	4	
	uniden. grass	7	33
	uniden. herb	4	
Total Species		20	12

### **3.5 SITE 3.5**

Marsh restoration Site 3.5 is a 1460 m long by 30 m wide intertidal marsh located approximately 570 m west and 890 m east of 72<sup>nd</sup> Street (**Appendix A, Drawings 6024 and 6025**). Three reference salt marsh areas were selected in the uncleared areas at the eastern and western limits of the restored area and approximately 50 m seaward from the dike (**Appendix A, Drawings 6024 and 6025**).

In August 2018, there was an improvement in restored marsh vegetation establishment (**Photos 17 and 18**). Some areas of marsh dieback observed in 2017 showed improved vegetation re-establishment (**Photo 19**). The reference marshes contained concentrated log accumulations (**Photo 20**). In the May 2018 log accumulation survey, most of the restored shoreline supported a medium density of log accumulation, except at a small section near the eastern boundary of the site (**Appendix C, Drawings 6074 and 6075**).

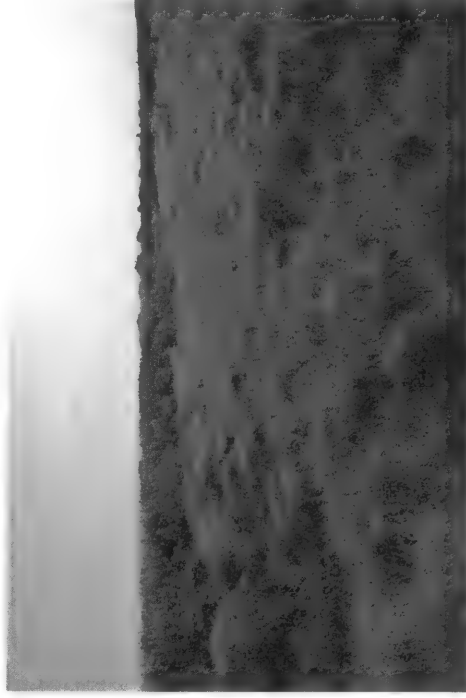
Marsh vegetation coverage was dense (i.e. 83%) in August 2018, compared to 86% in 2016, and moderately dense in 13% compared to 3% in 2016, of the quadrats sampled in the restoration marsh (**Figure 6; Appendix B, Table B-9**). Vegetation coverage in the reference marsh increased to 91% in 2018 compared to 73% in 2016 (**Figure 6; Appendix B, Table B-10**).

Seventeen species were recorded in the restoration marsh and 13 species in the reference marshes (**Table 5**). Orache, saltgrass, and gumweed were the most frequently recorded species in the restoration marsh (**Table 5; Appendix B, Table B-9**). In the reference marshes, high marsh species dominated including Douglas' aster, orache, yarrow, and dunegrass (**Table 5; Appendix B, Table B-10**). In August 2018, wood was noted in many of the restored marsh sites and most of the reference sites (**Appendix B, Tables B-9 and B-10**).

The restored marsh ranged in elevation from 1.3 m GD to 1.9 m GD based on elevations measured in August 2018 (**Appendix A, Drawings 6024 and 6025**). The reference marshes, located at the eastern and western ends of the restored marsh ranged from 1.5 m to 2.2 m GD, and from 1.6 m to 1.7 m GD at the low marsh located further from the dike. The elevation survey confirms that the restoration marsh is located between HHWMT (i.e. 1.1 m GD) and HHWLT (1.8 m GD), while the reference marsh in the eastern and western sections is high marsh associated more with HHWLT and offshore reference marsh is low marsh associated more with HHWMT.

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

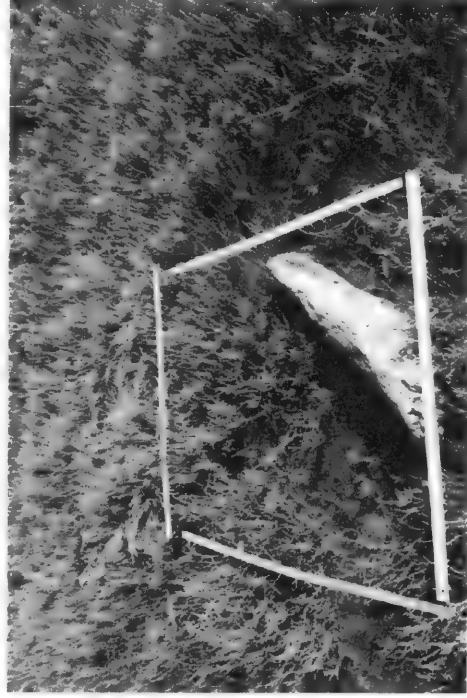
**FINAL  
FEBRUARY 7, 2019**



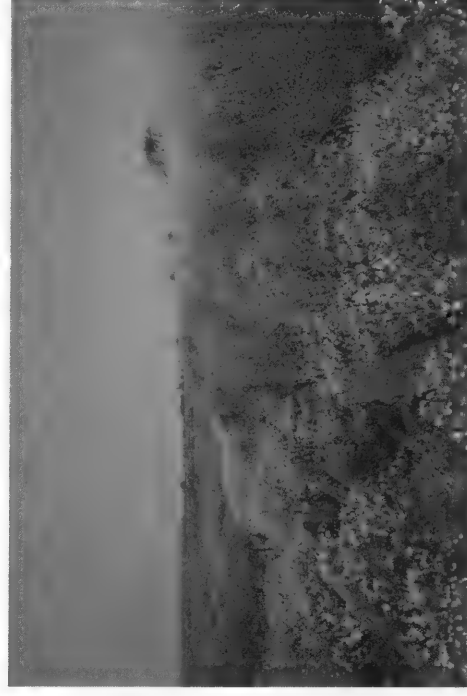
**Photo 17. Restored salt marsh vegetation east of 72<sup>nd</sup> Street.**



**Photo 19. Restored high marsh at 72<sup>nd</sup> Street.**



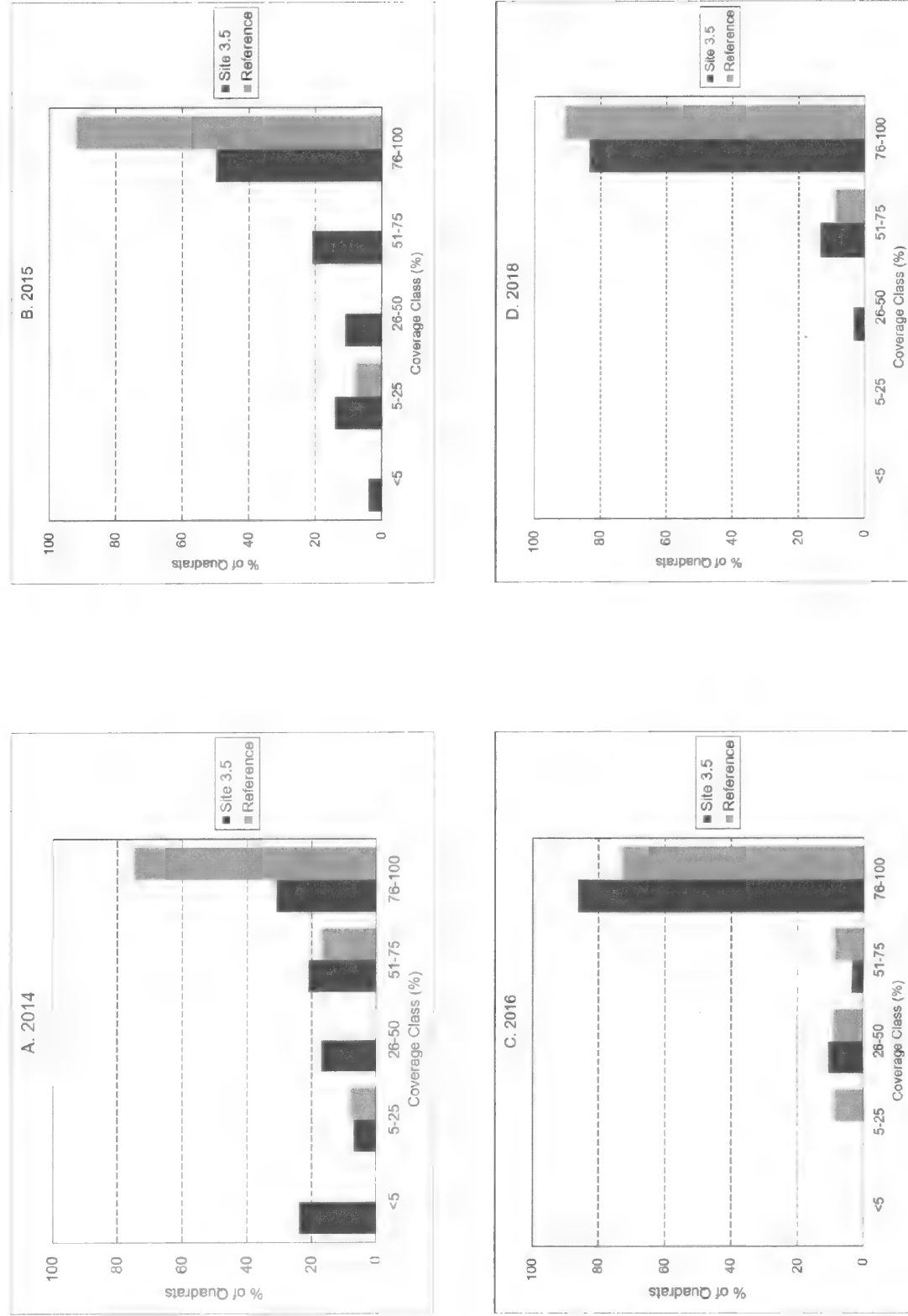
**Photo 18. Low marsh vegetation recolonizing impacted soils in east restored marsh.**



**Photo 20. Heavy log accumulation in reference marsh.**

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



**Figure 6** Site 3.5 salt marsh plant coverage trends from 2014 to 2018.



**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**

**Table 5 Site 3.5 Frequency of occurrence (%) of marsh species in quadrats.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Site 3.5	Reference
<i>Achillea millefolium</i>	yarrow	10	36
<i>Agrostis exarata</i>	spike bentgrass	10	27
<i>Alcea rosea</i>	hollyhock		9
<i>Angelica lucida</i>	sea-watch		9
<i>Atriplex patula</i>	orache	70	36
<i>Bolboschoenus maritimus</i>	seacoast bulrush	7	
<i>Cortula coronopifolia</i>	brass buttons	3	
<i>Cuscuta salina</i>	saltmarsh dodder	3	18
<i>Distichlis spicata</i>	saltgrass	67	18
<i>Epilobium ciliatum</i>	willowherb	7	
<i>Grindelia integrifolia</i>	gumweed	30	18
<i>Hordeum jubatum</i>	foxtail barley	3	9
<i>Leymus mollis</i>	dunegrass	17	36
<i>Sarcocornia pacifica</i>	pickleweed	20	27
<i>Solidago canadensis</i>	goldenrod	7	
<i>Symphyotrichum subspicatum</i>	Douglas' aster	10	45
<i>Tripleurospermum inodorum</i>	scentless mayweed	10	
	uniden. grass	10	18
	uniden. herb	6	
<b>Total Species</b>		17	13

## **4.0 SUMMARY AND RECOMMENDATIONS**

In 2018, the marsh restoration sites showed improved vegetation coverage at all sites except Site 3.3. Site 3.1, with full vegetation establishment in 2018, is the most sheltered site and the outer dike provides protection from storms and the influx of logs and wood debris. Site 3.2 is the most exposed site and experiences the most dynamic coastal environment. The plant community is evolving under these dynamic conditions and still has not established a climax stage of vegetation. Site 3.4 is an open embayment environment and logs concentrate along the toe of the dike. Site 3.5 is a long, open section of dike that is gradually being colonized by typical native halophytes in the low marsh and high marsh vegetation in the elevated elevations along the dike. Site 3.3 is the only site that is showing a declining trend since 2015. The reference marsh sites are heavily impacted by logs and on-going recruitment, which has reduced marsh vegetation coverage.

Logs are accumulating at all restored sites except Site 3.1, with some sites showing more rapid concentrations (e.g. Site 3.3) than others (Sites 3.2, Site 3.4, and Site 3.5). Site 3.2 is most exposed but the restoration marsh is situated along the seaward edge and logs are transported across the site and collected along the dike setback further to the north. However, the restored sites continue to have greater vegetation coverage than the unrestored reference marshes.

Invasive English cordgrass (*Spartina anglica*) should continue to be monitored to document the efficacy of the herbicide spreading and document any new cordgrass seedlings. The monitoring should be conducted in late spring or early summer so invasive cordgrass can be treated under the BC Spartina Working Group Treatment Plan.

The spring log accumulation survey, scheduled in April or early May, provides the most effective method to monitor logs because on-site observations are not obscured by heavy vegetation growth. Monitoring logs during the vegetation surveys in the late summer is not an effective way to monitor log accumulations. The combination of spring log accumulation surveys and late summer vegetation monitoring or inspections provides the most useful information for VFPA management

Based on the results of the five years of monitoring, it is recommended that the monitoring program could be modified to be more cost effective. The recommended monitoring activities for 2019 are listed in Table 6.

**Table 6 Recommended 2019 monitoring activities for Sites 3.1 to 3.5.**

Site	Log Accumulation Survey (April 2019)	<i>Spartina</i> Survey (May 2019)	Vegetative Monitoring (August 2019)	Elevation Survey (RTK GPS) (August 2019)	Inspection Only (August 2019)
3.1		✓			
3.2	✓		✓	✓	
3.3	✓				✓
3.4	✓				✓
3.5	✓				✓

- The log accumulation survey using RTK GPS is the best way to document log accumulations. The optimum time to conduct the survey is in the spring, preferably in April but no later than mid-May. This scheduling allows for maximum log accumulation following winter and early spring storms and ensures good visibility before the onset of vegetation growth. The spring log accumulation surveys using RTK GPS should continue at all sites, except site 3.1, until the log accumulation become heavy throughout the site. The intent of the monitoring is to document the efficacy of the log removal for promoting marsh recolonization and be able to have supporting data for credit determination. By continuing the RTK monitoring, VFPA will obtain data for confirming the recruitment of logs and the time period required for accumulation at each site.
- The vegetation surveys provide more detailed monitoring data, but they are labour intensive. In the future, late summer inspections could replace detailed monitoring for all sites except perhaps Site 3.2. until the vegetation has become more established. Site 3.2 is exposed to the marine processes within the intercauseway area on Roberts Bank and includes the gravel/sand berm that has formed from sediments transported landward from the causeway. The created berm appears to be colonizing by dune and high marsh vegetation. Continued detailed monitoring would be useful in documenting the stabilization and/or evolution of this habitat feature, as well as the distribution of salt marsh vegetation and logs within the Site.

## **5.0 LITERATURE CITED**

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## **Appendix A – Site Drawings**

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**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**

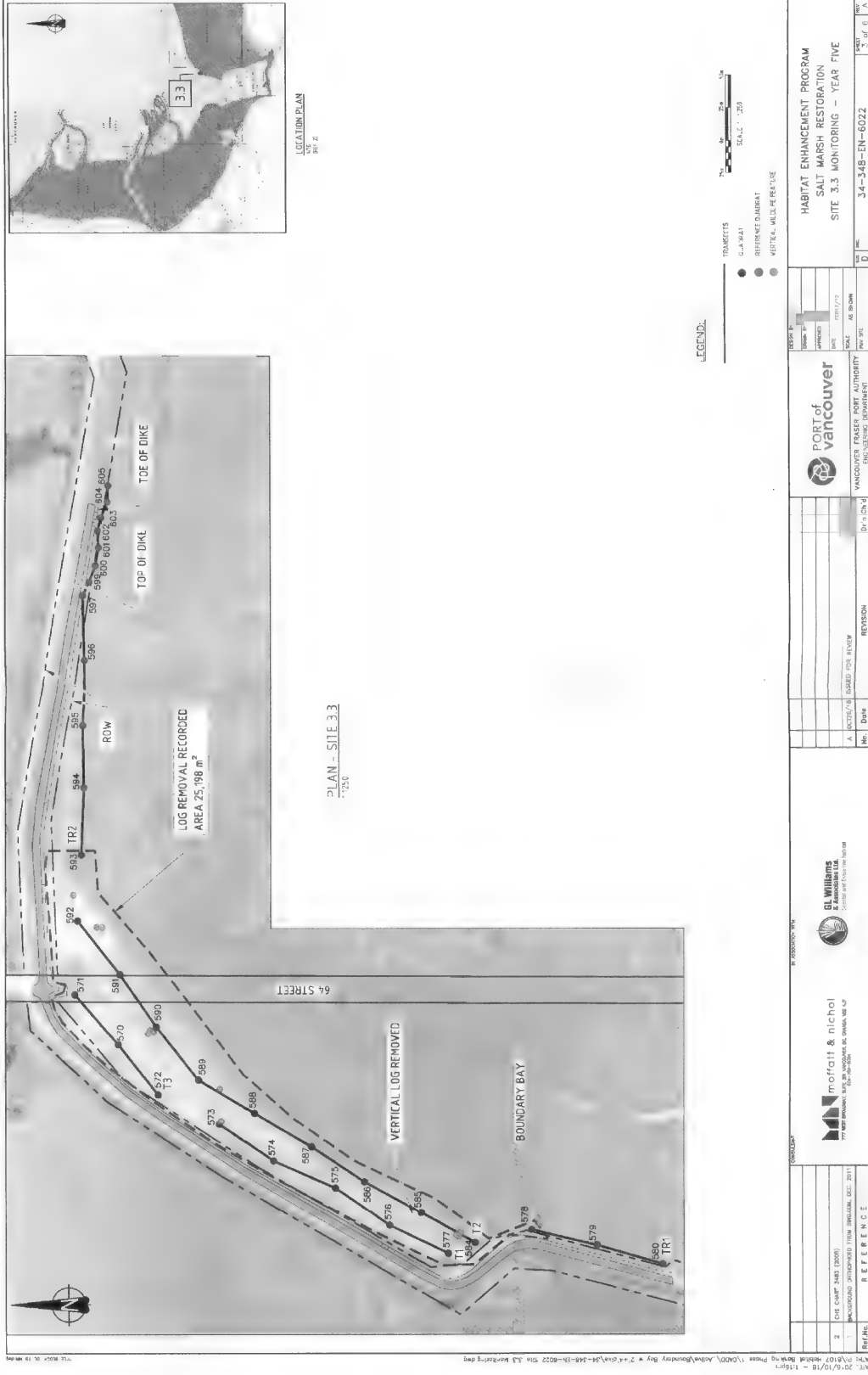


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**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



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**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

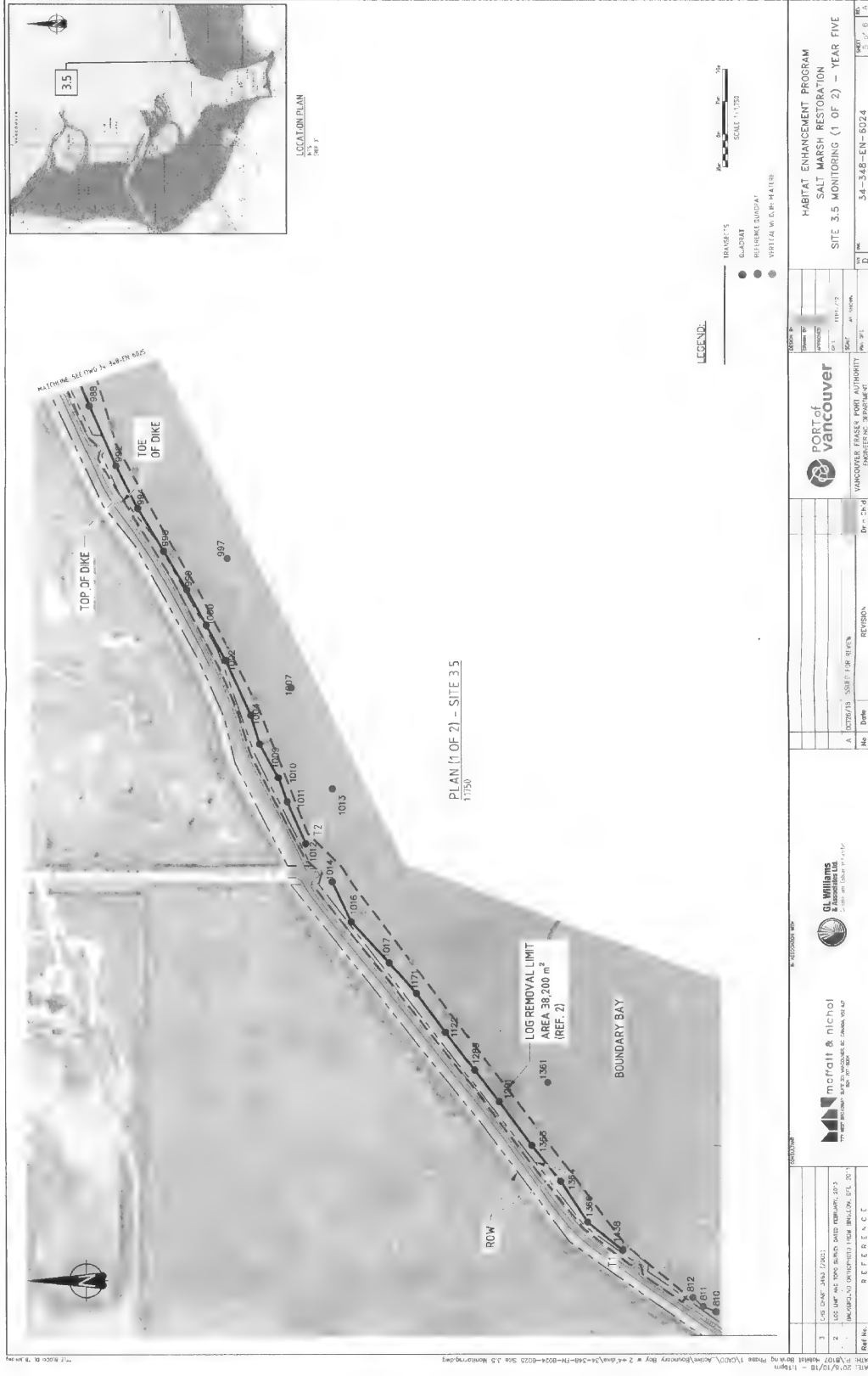
**FINAL  
FEBRUARY 7, 2019**



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**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

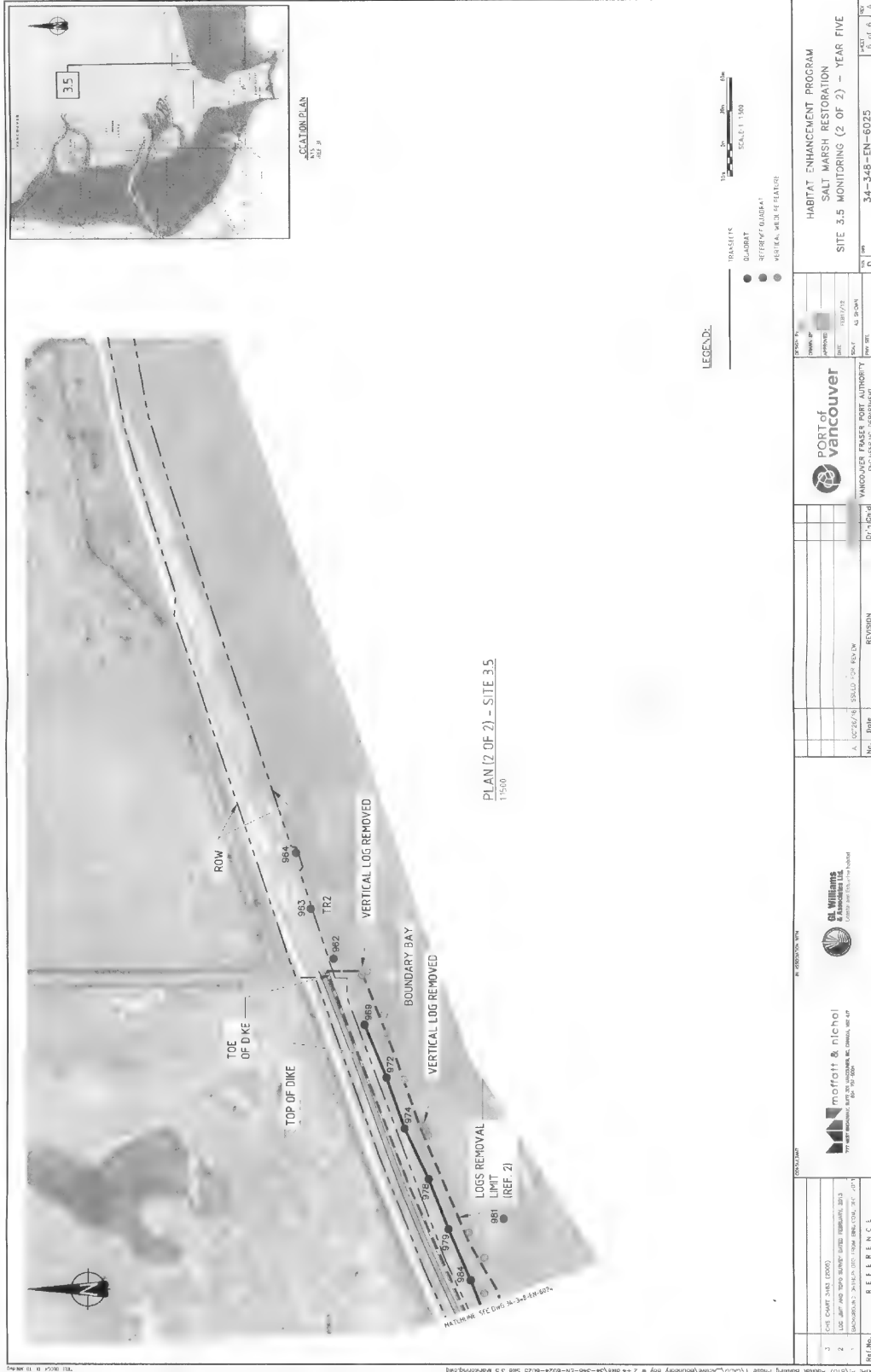
**FINAL  
FEBRUARY 7, 2019**



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**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



## **Appendix B – Intertidal Salt Marsh 2018 Vegetation Data**

(Coverage data are presented as individual species coverage class/whole quadrat class, i.e. 1/5)

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SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT

Table B - 1. Site 3.1 vegetation quadrat coverage and species percentage frequency of occurrence on August 8, 2018.

Species	Quadrat Number																										% Frequency
	235	236	237	238	239	240	241	242	243	244	245	246	247	249	250	251	252	253	254	256	257	258	260	261			
<i>Achillea millefolium</i>																		1/5							5		
<i>Agrostis exarata</i>																		1/5							46		
<i>Atriplex patula</i>							2/5					3/5		1/5											13		
<i>Deschampsia caespitosa</i>				1/5							1/5			1/5											13		
<i>Distichlis spicata</i>	5/5	4/5		3/5	3/5	4/5	5/5				2/5	4/5	5/5	2/5	4/5	1/5	1/5	3/5	1/5	1/5	1/5	1/5	1/5	1/5	67		
<i>Grindelia integrifolia</i>				2/5	3/5	3/5					3/5							1/5							29		
<i>Hordeum jubatum</i>																									5		
<i>Rosa nutkana</i>																		1/5	1/5			3/5	2/5		8		
<i>Rumex acetosella</i>																									8		
<i>Sarcocornia pacifica</i>	5/5	5/5	4/5	5/5	1/5	1/5	5/5	5/5	1/5	1/5	1/5	1/5	1/5	5/5				1/5		2/5	1/5	2/5	1/5	1/5	54		
<i>Spartina anglica</i>				2/5					1/5											2/5	1/5	1/5			8		
<i>Symphoricarum subspicatum</i>																									13		

Table B - 2. Site 3.1 reference vegetation quadrat coverage and species percentage frequency of occurrence on August 8, 2018.

Species	Quadrat number												% Frequency
	R492	R493	R494	R495	R496	R497	R498	R499	500	501	502	503	
<i>Atriplex patula</i>	1/5									1/5	1/5		33
<i>Cuscuta salina</i>							3/5	1/5	1/5	1/5	3/5	5/5	17
<i>Distichlis spicata</i>	2/5	1/5	2/5	3/5	2/5	2/5	1/5	1/5	1/5	1/5	3/5	1/5	92
<i>Grindelia integrifolia</i>							1/5					1/5	17
<i>Sarcocornia pacifica</i>	4/5	5/5	5/5	4/5	5/5	5/5	4/5	4/5	5/5	5/5	5/5	1/5	100
uniden. herb									1/5	1/5			17

Table B - 3. Site 3.2 vegetation quadrat coverage and species percentage frequency of occurrence on August 8, 2018.

Species	Quadrat Number																				% Frequency	
	504	505	507	508	509	510	511	512	513	514	515	516	518	519	520	521	522	523	524	528		529
<i>Achillea millefolium</i>																						
<i>Alcea rosea</i>	1/5		2/4	3/4	3/5	1/5	1/4	2/5			1/5											33
<i>Ambrosia chamissonis</i>																						5
<i>Atriplex patula</i>	4/5	1/2	1/4	1/4	4/5	3/4	3/5	3/5	4/4	5/5	4/5	3/5	4/5				2/4	3/5				52
<i>Cakile eduntula</i>		2/2			1/5	1/4	1/5	1/5	1/4	1/5		1/5					1/5	2/4				43
<i>Distichlis spicata</i>			1/4																			20
<i>Epilobium ciliatum</i>					1/5						2/5											5
<i>Grindelia integrifolia</i>																						10
<i>Lepidium virginicum</i>	2/5	2/4	1/4	1/5	1/5	3/4	2/5						3/5				4/5	2/4				14
<i>Leymus mollis</i>																						20
<i>Meibomia alba</i>					2/5							2/5		2/5	1/5	3/5						20
<i>Rumex acetosella</i>																						24
<i>Rumex crispus</i>					1/5										1/5							5
<i>Sarcocornia pacifica</i>															1/5							5
<i>Sonchus oleraceus</i>	1/5											1/5	1/5	3/5	1/5	1/5	1/5	2/5	2/5	1/5		43
<i>Tripeurospermum inodorum</i>			2/4	1/4									3/5	5/5	2/5	3/5		2/4	5/5	2/5		43
uniden. grass																						5
uniden. herb																				5/5		5

Notes: \* = wood coverage due to logs

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**

**Table B - 4. Site 3.2 reference vegetation quadrat coverage and species percentage frequency of occurrence on August 8, 2018.**

Species	Quadrat Number													% Frequency
	R530	R531	R532	R533	R534	R535	R536	R537	R538	R539	R540	R541		
<i>Ambrosia chamissonis</i>					1/3								8	
<i>Atriplex patula</i>	3/4	1/5	1/2		2/3	1/2	3/4	1/3	2/5	1/5	2/4		75	
<i>Cakile edentula</i>	1/4	1/5		1/3		1/2							33	
<i>Distichlis spicata</i>					1/3	1/2							17	
<i>Epiobium ciliatum</i>						1/2	1/4				1/4	1/4	33	
<i>Grindelia integrifolia</i>					1/3								8	
<i>Lepidium virginicum</i>	1/4	5/5		2/3					1/5	1/5	1/4	2/4	25	
<i>Leymus mollis</i>													33	
<i>Rumex acetosella</i>													8	
<i>Rumex crispus</i>							1/4		1/5	3/5	2/4	1/4	25	
<i>Sonchus arvensis</i>					1/3		1/4	2/3		1/5	1/4		50	
<i>Typha</i> sp.													8	
<i>Tripleurospermum inodorum</i>	2/4	2/5	2/2	2/3		1/2		1/3	1/5				58	
Unident. herb									1/5				8	

**Table B - 5. Site 3.3 vegetation quadrat coverage and species percentage of occurrence on August 16, 2016.**

Species	Quadrat																% Frequency		
	570	571	572	573	574	575	576	577	578	584	585	586	587	588	589	590		591	592
<i>Achillea millefolium</i>																			
<i>Agrostis exarata</i>		1/4	2/3		1/3		3/5		1/5		1/5	1/5	1/5	1/5	5/5	3/5	3/4	1/4	1/5
<i>Angelica lucida</i>		1/4						3/5	1/5										32
<i>Atriplex patula</i>	1/3		1/3	2/4	3/5	2/5	1/5	1/5	1/5									3/3	32
<i>Distichlis spicata</i>	2/3	3/3	2/4	1/3	1/5		5/5	4/4	5/5	5/5	5/5	5/5	5/5	5/5	1/5	3/5	2/4	1/3	79
<i>Grindelia integrifolia</i>																			5
<i>Lathyrus japonicus</i>								1/5										1/3	5
<i>Sarcocornia pacifica</i>																			5
<i>Sarcocornia rigida</i>																			5
<i>Sorbothus arvensis</i>																			5
<i>Symphoricarpos subspicatum</i>	2/3	3/4	1/3		1/3	3/5	2/5	1/5							1/5	3/5	3/4	3/5	58
<i>Tripsacum daniellii</i>	1/3					2/5	1/5												22
<i>Tripsacum inodorum</i>																			

**Table B - 6. Site 3.3 reference vegetation quadrat coverage and species percentage frequency of occurrence on August 8, 2018.**

Species	Quadrat Number														% Frequency
	R579	R580	R584	R595	R596	R597	R599	R600	R601	R602	R603	R604	R605		
<i>Achillea millefolium</i>		1/4		1/4	1/3	1/5		1/5	1/4	1/4	1/4			62	
<i>Agrostis exarata</i>		3/4	3/4					1/5	2/4					31	
<i>Atriplex patula</i>								1/5	1/4					8	
<i>Distichlis spicata</i>														8	
<i>Epiobium ciliatum</i>	2/3	1/4												8	
<i>Juncus arcticus</i>								1/5						8	
<i>Leymus mollis</i>				1/4	1/3				1/4					23	
<i>Potentilla anserina</i>				2/4										8	
<i>Rubus discolor</i>						2/5								8	
<i>Solidago canadensis</i>		2/4	3/4											15	
<i>Sonchus arvensis</i>	2/3	1/4	1/4	2/4	2/3		3/5	5/5	2/4	4/4	3/4	5/5	5/5	85	
<i>Symphoricarpos subspicatum</i>														8	
<i>Tripeurospermum inodorum</i>	1/3						5/5	1/5	1/5	1/4	2/4	1/5	1/5	31	
<i>Vicia</i> sp.														38	
unident. grass						5/5									

SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT

FINAL  
FEBRUARY 7, 2019

Table B - 7. Site 3.4 vegetation quadrat coverage and species percentage frequency of occurrence on August 9, 2018.

Species	Quadrat Number																				% Frequency							
	606	607	608	611	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801		802	803	804	805	806	807	808
<i>Achillea millefolium</i>	1/3	1/4	1/5	1/5									1/2					1/4	2/5	1/5	1/5	2/5	1/5	1/5	1/5	3/5	2/5	50
<i>Ambrosia chamissonis</i>																												4
<i>Angelica lucida</i>																												4
<i>Atriplex patula</i>	1/3	2/5		1/5							4/4	2/5		2/3			1/5	4/4	3/4	1/5	3/5			2/5				36
<i>Cuscuta salina</i>																												7
<i>Distichlis spicata</i>									1/5	3/5															5/5	2/5		36
<i>Grindelia integrifolia</i>												1/5		5/5														11
<i>Hordeum</i>											1/4							1/4										4
<i>Juncus arcticus</i>										2/5																		4
<i>Lepidium virginicum</i>	1/3																											4
<i>Leymus mollis</i>													1/2	3/3										1/5				11
Parasitic plant on aster																												4
<i>Rumex acetosella</i>																										1/5		4
<i>Sarcocornia pacifica</i>																												4
<i>Solidago canadensis</i>					1/5	5/5	4/4	5/5	5/5	3/5	4/5		1/2	2/3		5/5	5/5			4/5			4/5	3/5	2/5	2/5	1/5	32
<i>Sonchus arvensis</i>																									1/5	1/5		21
<i>Symphoricarpos subspicatum</i>	1/4																								1/5	1/5		14
<i>Tripsacum daniellii</i>	3/3	3/4	4/5	5/5																5/5	2/5		4/5	1/5	2/5	3/5	5/5	36
<i>Vicia sp.</i>																									1/5			4
unden. grass																												4
unden. herb																									1/5	1/5		7
																												4

Table B - 8. Site 3.4 reference vegetation quadrat coverage and species percentage frequency of occurrence on August 9, 2018.

Species	Quadrat Number																% Frequency
	R810	R811	R812	R813	R814	R815	R816	R817	R818	R819	R820	R821					
<i>Achillea millefolium</i>	1/5	2/5	1/5							2/4	1/5						42
<i>Agrostis alba</i>			2/5														8
<i>Angelica lucida</i>		2/5						1/5									17
<i>Atriplex patula</i>						2/5	2/5	5/5									25
<i>Distichlis spicata</i>				5/5		4/5	5/5										33
<i>Leymus mollis</i>	1/5	3/3	1/5									2/5					25
Unden. parasitic plant																	17
<i>Rumex acetosella</i>	1/5																8
<i>Sarcocornia pacifica</i>					1/5	1/5	1/5	1/5	1/5	1/4							58
<i>Solidago canadensis</i>											5/5	2/5					17
<i>Sonchus arvensis</i>	5/5	3/5	3/5							3/4		3/5					8
<i>Symphyotrichum subspicatum</i>	1/5	1/5								2/4	2/5						33

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**

**Table B - 9. Site 3.5 vegetation quadrat coverage and species percentage frequency of occurrence on August 9, 2018.**

Species	Quadrat Number																	Frequency													
	969	972	974	978	979	981	984	988	992	994	995	999	1000	1002	1004	1009	1010		1011	1012	1014	1016	1017	1171	1122	1289	1291	1363	1364	1386	1438
<i>Achillea millefolium</i>								1/5			1/5								3/4												10
<i>Agrostis exarata</i>					3/5							5/5	3/5				1/5	2/5	2/4		5/5	1/5	1/5		1/4	1/5	3/5	5/5	5/5	1/5	10
<i>Atriplex patula</i>	1/4	1/5	1/5	1/5	1/5	1/5	1/5	1/5		3/5							3/5														70
<i>Boopischoenus maritimus</i>		4/5																													7
<i>Cortula coronopifolia</i>																	3/5														3
<i>Cuscuta spicata</i>																	4/5	2/5			1/5	5/5	5/5	3/5	3/5	2/5	1/5	1/5	5/5	5/5	67
<i>Epilobium ciliatum</i>	4/4	5/5	5/5	3/5				3/5	5/5	5/5	4/5			3/5	1/2	1/5	4/5	2/5		1/5	1/5								1/5	1/5	7
<i>Grindelia integrifolia</i>	1/4									1/5	2/5					3/5	2/5	1/5					1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	30
<i>Hordeum jubatum</i>																															3
<i>Leymus mollis</i>											2/5	1/5						1/5		4/5	1/5				4/4	3/5		1/5			17
<i>Sarcocornia pacifica</i>								1/5						4/4	2/2	5/5															20
<i>Solidago canadensis</i>									2/5																						7
<i>Symphoricarpos subspicatum</i>						3/5						2/5						2/4		3/4		1/5									10
<i>Tripleurospermum inodorum</i>	5/5					1/5				1/5																					10
Inden grass											5/5	1/5																			10

**Table B - 10. Site 3.5 reference vegetation quadrat coverage and species percentage frequency of occurrence on August 9, 2018.**

Species	Quadrat Number											% Frequency
	R810	R811	R812	R862	R863	R864	R881	R897	R1007	R1013	R1361	
<i>Achillea millefolium</i>	2/5	2/5	1/5				1/5					36
<i>Agrostis exarata</i>	4/5	3/5	5/5									27
<i>Alcea rosea</i>					2/2							9
<i>Angelica lucida</i>		2/5										9
<i>Atriplex patula</i>								4/5	2/5	2/5		36
<i>Cuscuta salina</i>	1/5		1/5						2/5		2/5	18
<i>Distichlis spicata</i>								1/5	1/5	3/5		18
<i>Grindelia integrifolia</i>								1/5		1/5		18
<i>Hordeum</i>												9
<i>Leymus mollis</i>	1/5	2/5	2/5			5/5			5/5	5/5	5/5	36
<i>Sarcocornia pacifica</i>							5/5					27
<i>Symphoricarpos subspicatum</i>	3/5	3/5	1/5	4/4			5/5					45
unden grass				1/4			1/5					18



**Appendix C -  
April & May 2018  
Marsh Restoration Sites Wood Debris Accumulation Maps**

No information has been removed or severed from this page

**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



**PLAN - SITE 3.1**  
1:500

<b>PROJECT</b> HABITAT ENHANCEMENT PROGRAM SALT MARSH RESTORATION SITE 3.1 2018 LOG ACCUMULATION MONITORING		<b>DATE</b> 2018		<b>SCALE</b> 1:500	
<b>CLIENT</b> PORT METRO <b>vancouver</b> VANCOUVER FRASER PORT AUTHORITY ENGINEERING DEPARTMENT		<b>PROJECT NO.</b> 34-348-CN-6070		<b>DATE</b> 1 of 2	
<b>DATE</b> 2018/02/28		<b>DATE</b> 2018/02/28		<b>DATE</b> 2018/02/28	
<b>NO.</b> 1		<b>DATE</b> 2018/02/28		<b>DATE</b> 2018/02/28	
<b>REF. NO.</b> 1		<b>REF. NO.</b> 2		<b>REF. NO.</b> 3	
<b>REF. NO.</b> 1		<b>REF. NO.</b> 2		<b>REF. NO.</b> 3	

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SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT

FINAL  
FEBRUARY 7, 2019



PLAN - SITE 32

<b>PORT of Vancouver</b> VANCOUVER FREEPORT AUTHORITY LICENSING DEPARTMENT		Date: 02/19/2019 Time: 10:00 AM User: J. Smith Job: 34-348-EN-6071
<b>CL Williams</b> CONSULTANT 2140 West 10th Avenue, Suite 200 Vancouver, BC V6H 1T6		Date: 02/19/2019 Time: 10:00 AM User: J. Smith Job: 34-348-EN-6071
<b>moffatt &amp; nichol</b> CONSULTANT 1711 West 10th Avenue, Suite 200 Vancouver, BC V6H 1T6		Date: 02/19/2019 Time: 10:00 AM User: J. Smith Job: 34-348-EN-6071
<b>REFERENCE</b> 1. 2018 LOG ACCUMULATION MONITORING 2. 2017 LOG ACCUMULATION MONITORING		Date: 02/19/2019 Time: 10:00 AM User: J. Smith Job: 34-348-EN-6071

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**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



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**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

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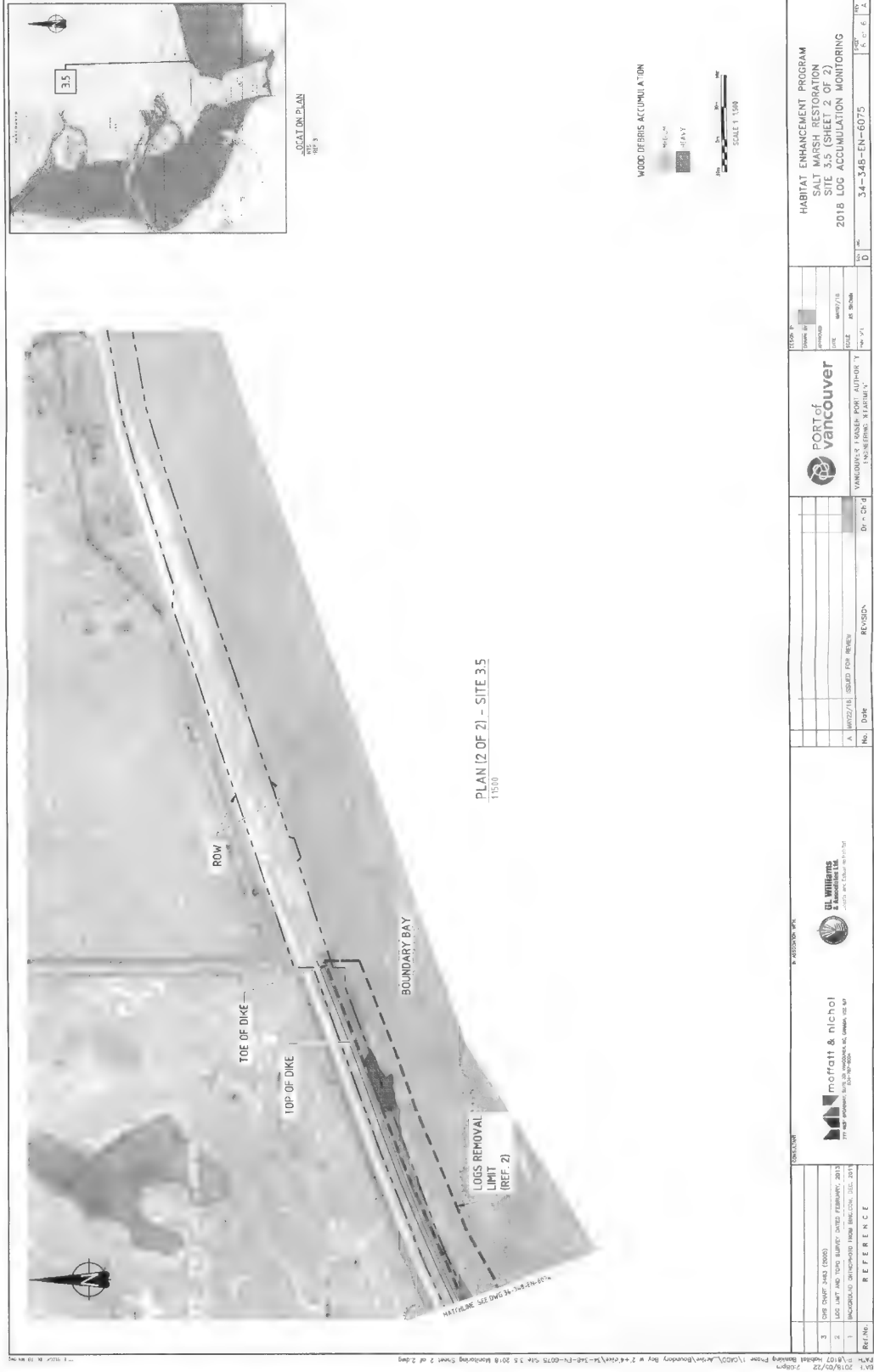


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**SALT MARSH RESTORATION SITES  
FIFTH YEAR MONITORING REPORT**

**FINAL  
FEBRUARY 7, 2019**



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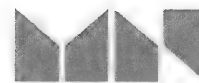


**VANCOUVER FRASER PORT AUTHORITY  
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GLENORE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING  
FINAL REPORT**

**NOVEMBER 13, 2018**



**GL Williams  
& Associates Ltd.**



moffatt & nichol



**VANCOUVER FRASER AUTHORITY**  
**HABITAT ENHANCEMENT PROGRAM**  
**GLENROSE TIDAL MARSH PROJECT**  
**FOURTH YEAR MONITORING**  
**FINAL REPORT**

**Prepared for:** Vancouver Fraser Port Authority  
Habitat Enhancement Program  
Port of Vancouver  
100 The Pointe, 999 Canada Place  
Vancouver, BC Canada  
V6C 3T4

**Prepared by:**

GL Williams & Associates Ltd.  
2907 Silver Lake Place  
Coquitlam, B.C.  
V3C 6A2

Moffatt & Nichol  
301-777 W. Broadway  
Vancouver, BC  
V5Z 4J7

NOVEMBER 13, 2018

## **TABLE OF CONTENTS**

1.0 Introduction .....	1
2.0 2018 Monitoring Program Methods .....	3
2.1 Marsh Vegetation .....	3
3.0 Results .....	8
3.1 Glenrose Downstream Intertidal Marsh Site .....	8
3.2 Glenrose Cannery Intertidal Marsh Site .....	14
3.3 Gunderson Slough Mudflat Tidal Marsh Site .....	20
4.0 Summary and recommendations .....	29
5.0 Literature Cited .....	33

### **List of Tables**

Table 1 Frequency of occurrence (%) of marsh species in quadrats sampled at Glenrose Downstream constructed and reference marshes on July 26, 2018 .....	13
Table 2 Frequency of occurrence (%) of marsh species in quadrats sampled at Glenrose Cannery constructed and reference marshes on July 26, 2018 .....	19
Table 3 Frequency of occurrence (%) of marsh species in quadrats sampled at Gunderson Slough Mudflat and reference marshes on July 26, 2018 .....	26
Table 4 Frequency of occurrence (%) of marsh species in quadrats sampled at Downstream, Cannery, and Gunderson constructed marshes and reference marshes in July 2018 .....	30

### **List of Figures**

Figure 1 Location of the three VFPA Glenrose Tidal Marsh Project sites in Delta on the South Arm of the Fraser River; Glenrose Downstream, Glenrose Cannery and Gunderson Slough Mudflat (Source: 2014 aerial base map from Deltamap) .....	2
Figure 2 Glenrose Downstream post-construction monitoring .....	5
Figure 3 Glenrose Cannery post-construction monitoring .....	6
Figure 4 Gunderson Slough Mudflat post-construction monitoring and experimental enclosure transplants .....	7
Figure 5 Glenrose Downstream marsh plant coverage trends from 2015 to 2018 .....	12
Figure 6 Glenrose Cannery marsh plant coverage trends from 2015-2018 .....	16
Figure 7 Fraser River hydrographs for 2017 and 2018 showing freshet patterns .....	17
Figure 8 Glenrose Gunderson Slough Mudflat marsh plant coverage trends from 2015 to 2018 .....	25

### **Appendices**

A – 2018 Intertidal Marsh Vegetation Data .....	34
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## **1.0 INTRODUCTION**

In 2018 the fourth annual post-construction monitoring of the Vancouver Fraser Port Authority (VFPA) Habitat Enhancement Program Glenrose Tidal Marsh Project was conducted. The monitoring effort included topographical survey with [REDACTED] Van Bower Construction Services, and [REDACTED] GL Williams & Associates on July 25, vegetation sampling by [REDACTED] on July 26, and engineering assessment by [REDACTED] Moffatt & Nichol, on August 15.

The Glenrose Tidal Marsh Project consists of three constructed intertidal marsh sites along the South Arm of the Fraser River in Delta (**Figure 1**):

- Glenrose Downstream that involved construction of an intertidal marsh bench behind a rock riprap containment berm;
- Glenrose Cannery that involved overlaying an intertidal rock riprap apron with soil;
- Gunderson Slough Mudflat that involved placement of soil between rock groins to raise elevations of unvegetated mudflat.

The Habitat Enhancement Program (HEP) was initiated in 2012 with Fisheries and Oceans Canada (DFO) with the signing of the **Working Agreement Concerning Procedures for Development and Operation of the VFPA Habitat Bank**. The agreement builds on previous port habitat banking efforts conducted in the Fraser River estuary to create, restore and enhance fish habitat to offset potential future impacts from development projects.

This 2018 Fourth Year Monitoring Report addresses requirements of VFPA's Post-Construction Monitoring Plan (March 2015) and adds to the data previously collected from 2015 to 2017 (Williams 2015; Williams and Tranmer 2016; Williams and Tranmer 2017). The fourth post-construction monitoring report includes documentation and assessment of the marsh vegetation establishment and engineering stability, as well as recommendations to guide future monitoring and maintenance. The report also benefited from an on-site assessment on August 10 involving VFPA, Moffatt and Nichol and GL Williams & Associates, which was specifically focused on the sand berm and supplemental vegetation planting to determine maintenance and remedial measures.



**Figure 1** Location of the three VFPA Glenrose Tidal Marsh Project sites in Delta on the South Arm of the Fraser River; Glenrose Downstream, Glenrose Cannery and Gunderson Slough Mudflat (Source: 2014 aerial base map from Deltamap).

## 2.0 2018 MONITORING PROGRAM METHODS

The 2018 Glenrose Tidal Marsh monitoring program was conducted by [REDACTED], GL Williams & Associates, and [REDACTED], Moffatt & Nichol, with topographical surveying using RTK GPS by Van Bower Construction Services. The program focused on two main components:

- marsh vegetation establishment; and,
- stability of constructed habitat and engineering assessment.

### 2.1 MARSH VEGETATION

The vegetation survey methods followed the approach used in previous years except that vegetation sampling was conducted on July 26, 2018 following the topographical survey on July 25, 2018 and prior to the engineering assessment on August 15, 2018. For each site, marsh vegetation transects and quadrat positions and elevations were surveyed using an RTK GPS, and biological and engineering features were documented and surveyed as required by the engineer and biologist. A total of 20 sample quadrats were selected along the transects at each of the three sites to ensure adequate representative coverage of the establishing vegetation community (James-Pirri 2007). Vegetation monitoring was scheduled in late July to coincide with the period of peak plant biomass for sedge (Kistritz 1983) and daylight low tides.

The sampling transects and quadrats for each site are shown in **Figures 2-4**. Reference quadrats were selected along transects in the Alex Fraser compensation marsh located downstream of the Glenrose Downstream site, in the tidal marsh immediately upstream of Glenrose Cannery, and in selected quadrats along the edge of the existing natural marsh along the shore at the Gunderson Slough Mudflat site.

Marsh vegetation coverage was assessed using 1-m<sup>2</sup> quadrats, delineated with aluminium metre sticks, in the constructed and reference marshes. Plant coverage within each quadrat was estimated according to a modified Braun-Banquet method consisting of five classes of cover: class 5 = 76-100%; class 4 = 51-75%, class 3 = 26-50%, class 2 = 5-25%, and class 1 = <5%. Species identification followed Hitchcock *et al.* (1984), using the updated taxonomy of (Kozloff 2005). Each quadrat and incidental observations were documented using a Nikon D7000 digital camera equipped with a 18-300 mm zoom lens. The marsh sampling protocol has been developed by GL Williams & Associates and has been used to assess numerous DFO-authorized marsh habitat compensation projects in the Fraser River estuary. The data obtained effectively demonstrate vegetation establishment and project compliance.

Experimental plantings in enclosures E1 and E2 installed in 2016, E3 and E4 in 2017, and E5-E8 in 2018 were conducted at Gunderson (Figure 4). Growth within these enclosures was also assessed qualitatively and photo-documented in the 2018 monitoring program.

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### **2.1.1 Gunderson Trial Enclosures and Nelson View Creek Tidal Channel Stabilization Project**

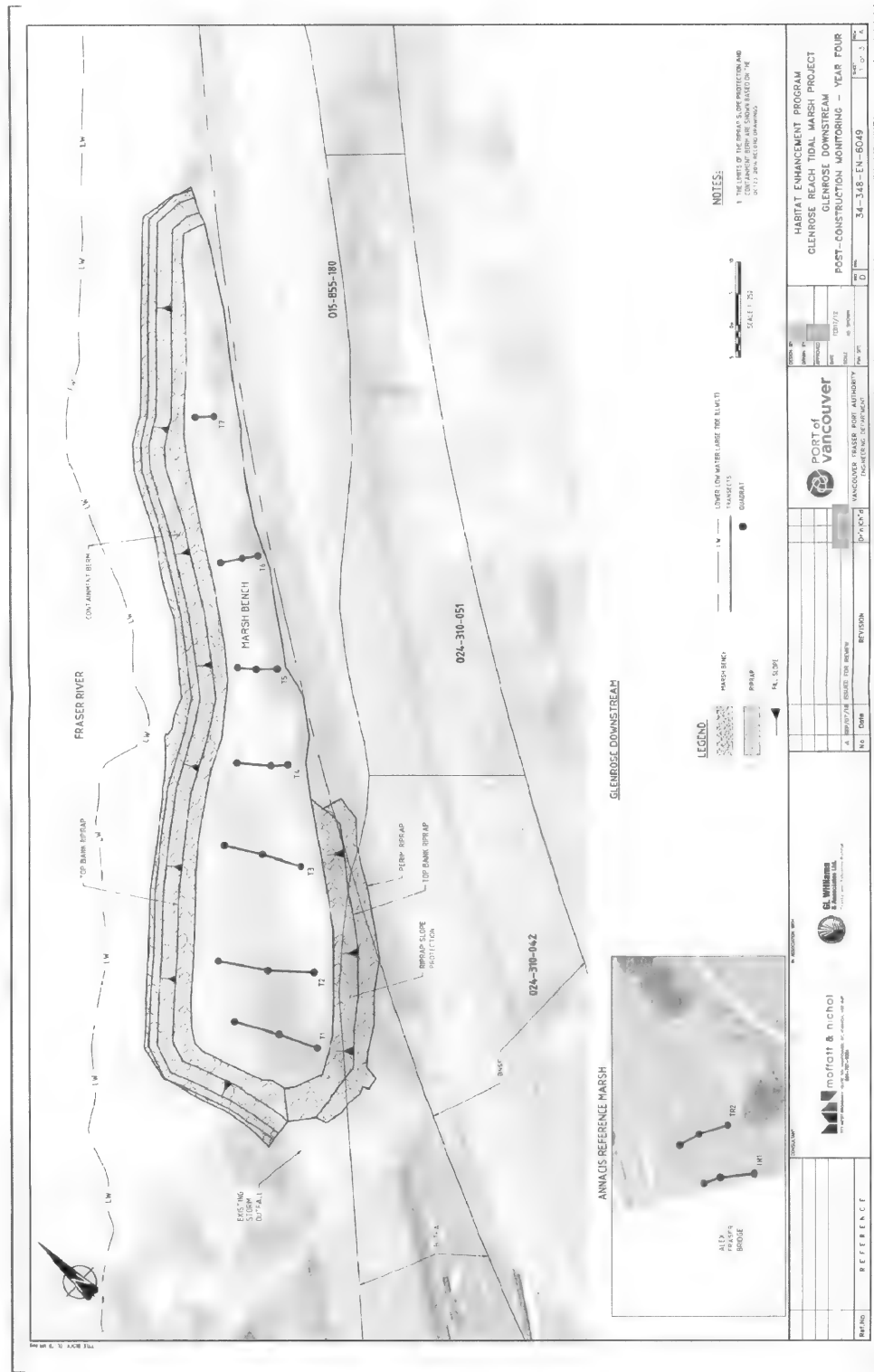
In April 2018 at Gunderson Slough Mudflat tidal marsh site alternate enclosure designs using natural fabric fencing to prevent geese grazing of marsh vegetation were tested. The natural fabric fencing was used in lieu of previously used Velar plastic fencing. In addition, bank stabilization of the Nelson View Creek tidal channel was attempted. Three enclosure designs were tested used fencing constructed from biodegradable coir mat blankets, burlap fabric, and jute fabric tied to 2.5 cm diameter wood posts. Within each enclosure marsh plugs were transplanted into predetermined grids; the grids had geese “resistant” marsh plant species planted along the edge of the enclosure and preferred geese plant species planted in the interior. Rope with bird deterrent tape was attached across the top of the enclosures and tied to the wooden posts.

The four new enclosures (E5 to E8) were erected in the open areas around Nelson View Creek tidal channel (**Figure 4**). E5 and E6 were located along the rock groin west of the 2017 trial enclosure E4, E7 was positioned in between 2017 enclosures E4 and E3, and E8 was located upstream of 2017 Enclosure E3.

For each enclosure, eight intertidal marsh species from Peel’s Nurseries were used for transplanting. The transplanting was comprised of four species that geese preferred and four species that geese did not prefer. The design included strategically transplanting plugs at a planting density of 4 plugs/m<sup>2</sup>. The non-preferred plant species included common cattail (*Typha latifolia*), hardstem bulrush (*Schoenoplectus acutus*), common rush (*Juncus effusus*), and Baltic rush (*Juncus arcticus*). The centre preferred species included Lyngbye’s sedge (*Carex lyngbyei*), tapered rush (*Juncus acuminatus*), spikerush (*Eleocharis palustris*), and wapato (*Sagittaria latifolia*). A 1.5 m wide unplanted buffer was left around the perimeter of each enclosure to observe natural infilling from natural recruitment.

The Nelson View Creek tidal channel bank stabilization included covering the banks and bed with coir mat blanket and securing with cedar posts, live willow (*Salix scouleriana*) stakes and transplanted marsh plugs. Lyngbye’s sedge, wapato and three-square bulrush (*Schoenoplectus pungens*) were the marsh plants used in the trial stabilization. The willow stakes, approximately 1 m in length, were installed into the substrate at the top of bank.

The results of the 2018 trial enclosures and Nelson View Creek bank stabilization project is included in Section 3.3.



**Figure 2** Glenrose Downstream post-construction monitoring.





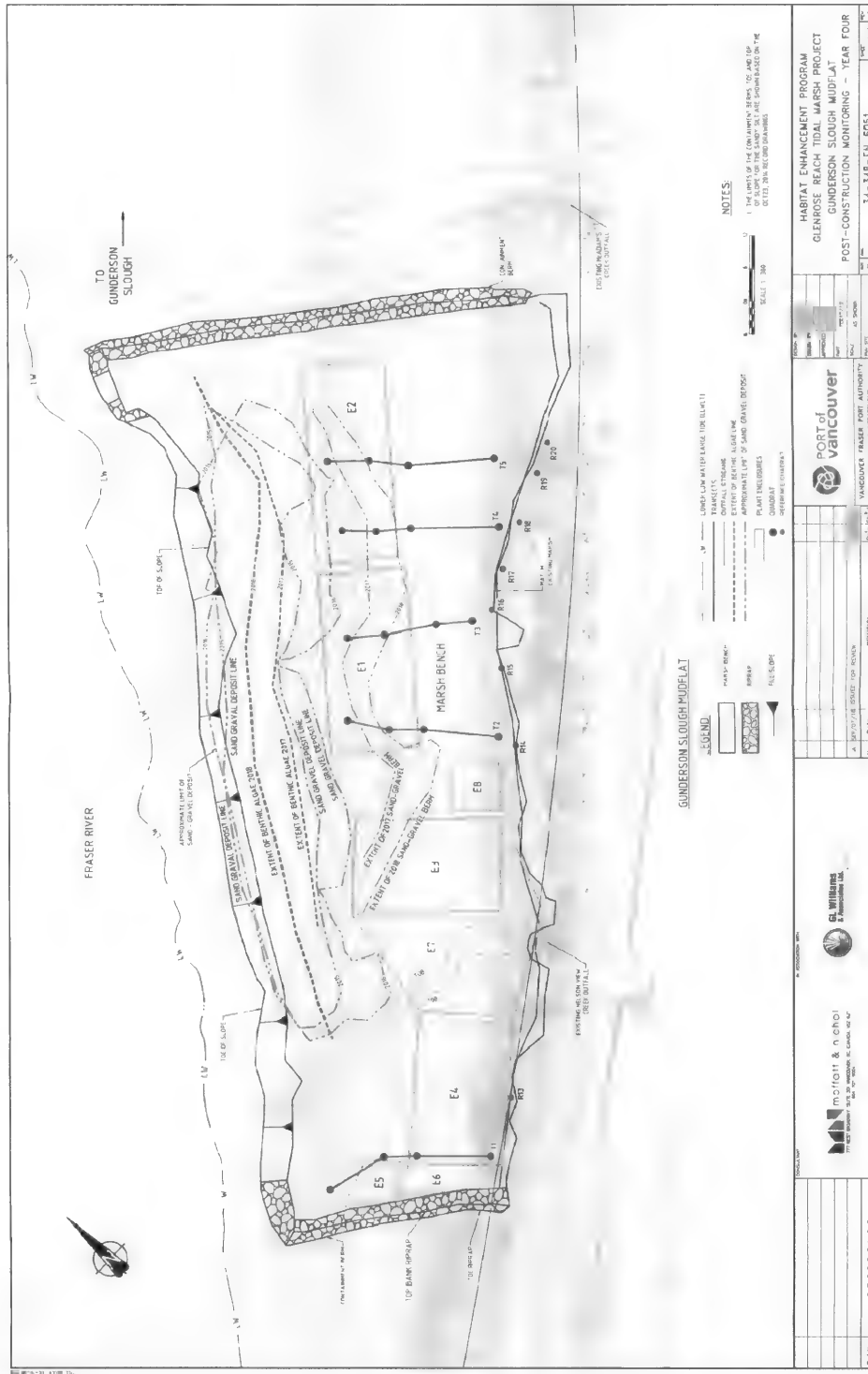


Figure 4 Gunderson Slough Mudflat post-construction monitoring and experimental enclosure transplants.

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### **3.0 RESULTS**

#### **3.1 GLENROSE DOWNSTREAM INTERTIDAL MARSH SITE**

The vegetation establishment at the Glenrose Downstream constructed marsh bench and reference marsh under the Alex Fraser bridge was assessed on July 26, 2018, following the GPS RTK survey on July 25. An engineering stability assessment was conducted on August 15, 2018. The sampling transects and quadrat locations are shown in **Figure 2** and quadrat sampling data are provided in **Appendix A, Tables A-1 and A-4**.

The intertidal vegetation was dense over the entire marsh bench (**Photos 1 and 2**). Baltic rush, a mat forming species, was one of the biological design features of the planting plan to address incoming vessel generated waves. The Baltic rush has formed a dense perimeter around the transplanted vegetation (**Photo 3**), with the exception of a short section in the northwest that is most exposed to upstream vessel traffic and was observed to be a site of Canada geese grazing (**Photo 4**). The interior of the marsh bench supports a diverse marsh vegetation community. The upstream section is narrower in width and is partially shaded by the trees and shrubs that grow along the shore, but dense vegetation has established (**Photo 2**).

The reference marsh transects and quadrats are located downstream of the site under the Alex Fraser Bridge inside a slough (**Photo 5**) constructed as compensation for the bridge. The reference marsh had dense vegetation cover. The reference marsh transects extended from the higher elevation marsh at the base of the rock riprap to the low elevation marsh at the edge of the unvegetated mudflat (**Photo 6**).

The only observed impacts to the constructed marsh were a small edge effect of reduced vegetation cover from vessel generated waves and/or Canada geese grazing (**Photo 7**) and stranded logs (**Photo 8**). Within the former, clumps of transplanted Baltic rush and naturally recruited pondweed and water starwort were observed in the July survey. The log accumulations were located within the upper and central section of the marsh and were concentrated along the toe of the shoreline bank protection. Most of these logs are transient, being transported into the site during freshet and out of the marsh during high water flows in winter when emergent marsh vegetation has died back and does not retain floating logs.

Vegetation sampling data show that the constructed marsh had dense cover in 2018 and 2017, similar to the reference marsh (**Figure 5**). The dense coverage was achieved after three growing seasons and now appears to have reached a stable vegetation community. The reference marsh is a mature marsh, constructed over a decade ago as compensation for the Alex Fraser bridge. Individual quadrat vegetation coverage data for the Glenrose Downstream and reference marshes show that all quadrats had dense coverage (**Appendix A, Tables A-1 and A-4**, respectively).

Sixteen marsh plant species were recorded within the Glenrose Downstream marsh, comprised of the six-transplanted species and 10 naturally recruited species (**Table 1; Appendix A, Table A-1**). Baltic rush and

Lyngbye's sedge, both transplanted species, were recorded most frequently in the quadrats sampled. Purple loosestrife, an invasive plant in freshwater and brackish marshes, was present but had a low frequency of occurrence in the vegetation quadrats sampled (**Table 1**). The plant diversity in the reference marsh was slightly higher with 19 species (**Table 1; Appendix A, Table A-4**). Five species were present in 50% or more of the quadrats sampled, including water forget-me-not, Lyngbye's sedge, swamp horsetail, common cattail, and American bugleweed (**Table 1**).

During the sampling, maximum blade length was measured to provide an indication of plant production. The average height in the constructed marsh was 96 cm, with lower elevation plants having lower lengths than higher elevation plants, suggesting that geese grazing along the edge was occurring, probably when the plants are in early stages of growth in spring. Sedge in the reference marsh averaged 110 cm and did not appear to be grazed. The data support observations that geese prefer to graze the edge of marshes and do not enter dense vegetation.

The marsh surface elevations were similar to previous years (**Figure 2**). The intertidal marsh vegetation in the Downstream marsh ranged from 0.6 m geodetic (GD) to approximately 1.0 m GD. The reference marsh ranged from 0.3 m GD in the lower marsh to 0.9 m GD at the base of the riprap. The rock riprap berm and shoreline armouring were observed to be stable and functioning as designed.

The 2018 monitoring results confirm that the Downstream marsh design is successful and providing ideal conditions for marsh establishment. Marsh coverage and plant diversity, achieved in only three growing seasons, is high and equivalent to the mature reference marsh. Transplanted species were dominant in the plants recorded in the Downstream marsh and naturally recruited species were also contributing to the plant diversity. Based on these results, the constructed habitat is providing high quality habitat for fish and wildlife equivalent to the reference marsh.

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**



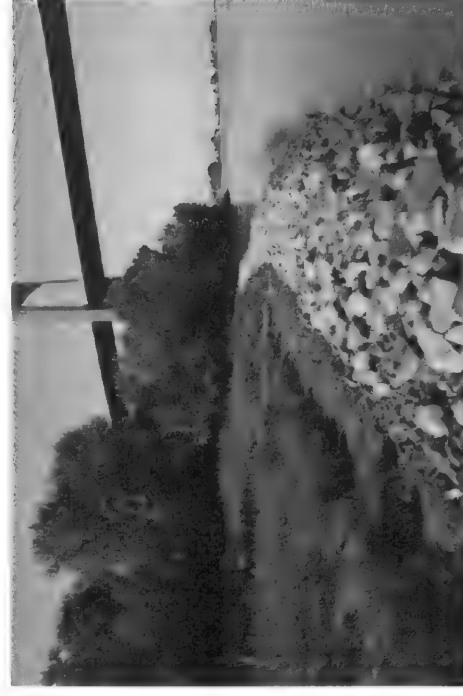
**Photo 1. Glenrose Downstream marsh at low tide.**



**Photo 2. Dense Baltic rush growth along riprap berm.**



**Photo 3. Dense perimeter growth of Baltic rush inside the rock riprap berm.**



**Photo 4. Reduced edge vegetation along edge of berm from Canada geese grazing and/or wave exposure.**

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**

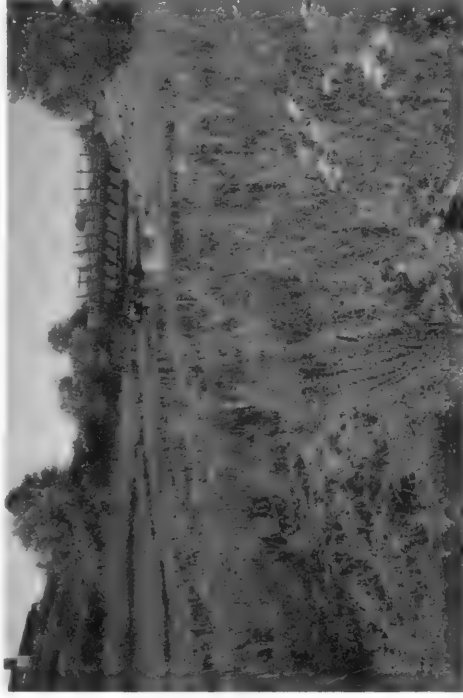


Photo 5. Reference marsh under Alex Fraser Bridge.



Photo 6. Dense plant growth along reference marsh transect.



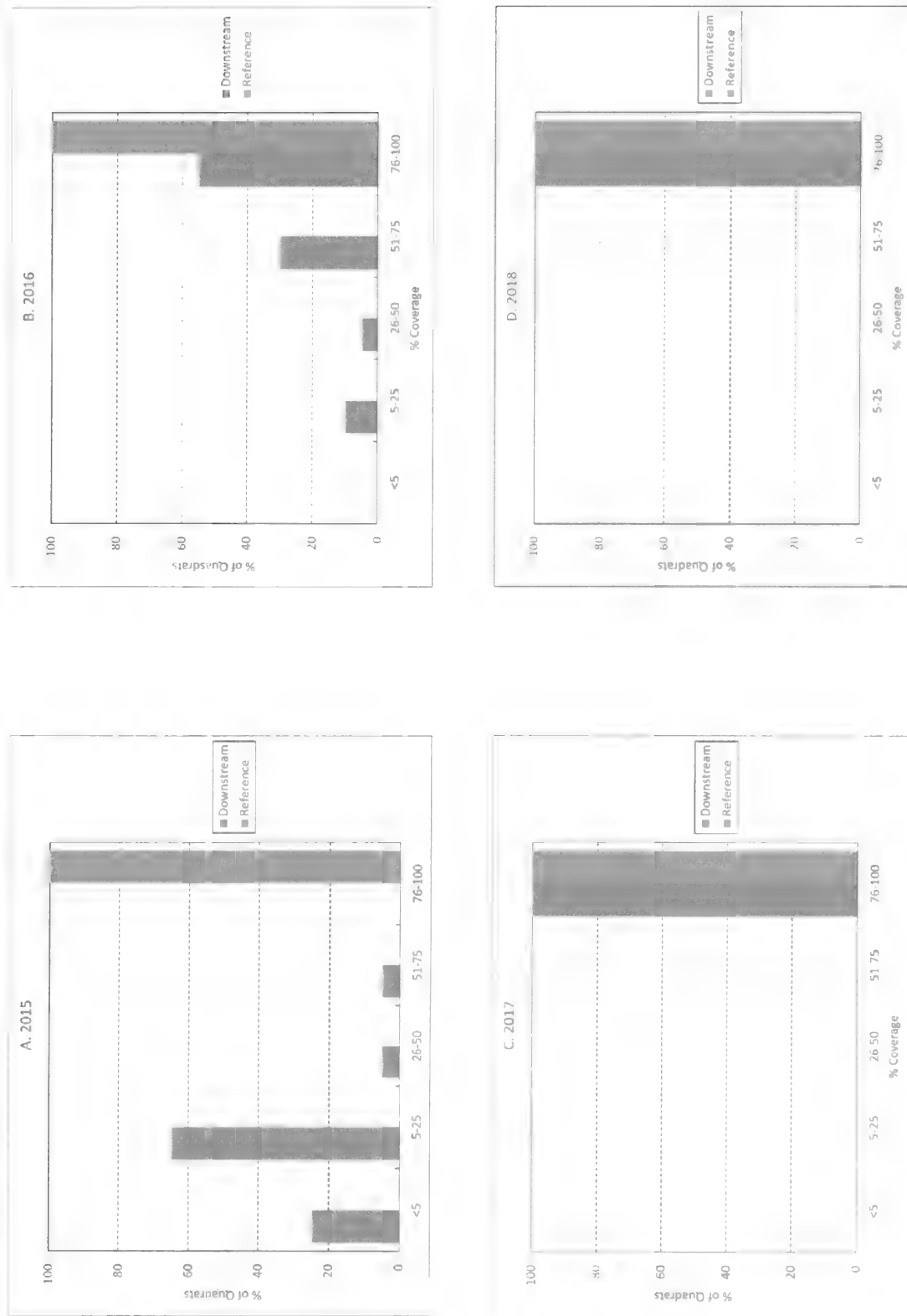
Photo 7. Reduced marsh vegetation along berm edge.



Photo 8. Logs stranded along toe of the bank riprap.

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**



**Figure 5** Glenrose Downstream marsh plant coverage trends from 2015 to 2018.

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**

**Table 1 Frequency of occurrence (%) of marsh species in quadrats sampled at Glenrose Downstream constructed and reference marshes on July 26, 2018.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Constructed	Reference
<i>Alisma plantago-aquatica</i>	water plantain		33
<i>Bidens cernua</i>	nodding beggarticks	15	33
<i>Callitriche stagnalis</i>	common water starwort	5	33
<i>Caltha palustris</i>	yellow marsh marigold		33
<i>Carex lyngbyei</i> *	Lyngbye's sedge	90	83
<i>Eleocharis palustris</i> *	spikerush	10	33
<i>Equisetum fluviatile</i>	swamp horsetail		67
<i>Isolepis cernua</i>	low clubrush		17
<i>Juncus acuminatus</i> *	tapered rush	5	
<i>Juncus articulatis</i>	jointed rush	5	
<i>Juncus arcticus</i> *	Baltic rush	100	17
<i>Juncus effusus</i>	common rush	15	
<i>Juncus oxymeris</i>	pointed rush		33
<i>Lilaeopsis occidentalis</i>	lilaeopsis		17
<i>Limosella aquatica</i>	mudwort		17
<i>Lycopus americanus</i>	American bugleweed	5	50
<i>Lysimachia vulgaris</i>			17
<i>Lythrum salicaria</i>	purple loosestrife	5	
<i>Mimulus guttatus</i>	yellow monkey flower		
<i>Myosotis scorpioides</i>	water forget-me-not		100
<i>Phalaris arundinacea</i>	reed canarygrass	5	33
<i>Polygonum sp.</i>	pondweed	5	33
<i>Sagittaria latifolia</i> *	arrowhead	20	
<i>Schoenoplectus acutus</i>	hardstem bulrush	10	
<i>Symphyotrichum subspicatum</i>	Douglas' aster		17
<i>Typha latifolia</i> *	common cattail	10	67
	uniden. grass	5	

\*Denotes a transplanted species

### **3.2 GLENROSE CANNERY INTERTIDAL MARSH SITE**

At the Glenrose Cannery constructed marsh bench and reference marsh immediately upstream the vegetation establishment was assessed on July 26, 2018, immediately following the GPS RTK survey of the transect and quadrat locations on July 25. An engineering assessment was conducted on August 15, 2018. The transects and quadrat locations are shown in **Figure 3** and quadrat sampling data are shown in **Appendix A, Tables A-2 and A-4**.

The Glenrose Cannery site consists of a section downstream of the former cannery building (Cannery West) that retained more of the placed dredged material and a section upstream (Cannery East) that experienced heavy scour and had lost most of the placed dredged material. Cannery West supported improved plant coverage in 2018 (**Photos 9 and 10**). Cannery East had predominately bare rock substrate (**Photo 11**), but also had a slight improvement in coverage in 2018 over 2017 in some of the quadrats supporting moderately dense cover (51-75% coverage). Coverage in the upstream reference marsh plant coverage was much more established (**Photo 12**), although there was some variability between plant coverage between the sampled quadrats (**Appendix A, Table A-4**). The reference marsh vegetation had naturally colonized the rock riprap apron placed several years ago.

In 2018, the plant coverage data in the constructed and reference marshes was more variable than 2017 (**Figure 6; Appendix A, Table A-2 and Table A-4**). Cannery West had an increase in the dense (i.e. 76-100 % coverage) quadrats and increase in lower (i.e. <25 % coverage) quadrats, although there was a net improvement in coverage in 2018. Cannery East had a reversing trend with an increase in the lower coverage quadrats. The reference marsh showed mixed quadrat results with increased dense coverage (i.e. 76-100%) and lower (i.e. 5-25% coverage).

The plant coverage reflects the amount of dredged material retained at the site, with higher plant growth and coverage occurring where the soil was retained but sparse growth occurring in areas where scour was more pronounced. In areas where the vegetation was established or beginning to become established, more soil sediments were retained (i.e. during freshet), and the resulting sediment accretion resulted in better growing conditions for plants. In sparsely vegetated areas, scour occurred, sediments were removed, and plant coverage decreased.

The Fraser River freshet showed a different pattern in 2018 than 2017 (**Figure 7**), with a more rapid increase in discharge to a peak in mid-May and rapid decrease through June. In 2017, the peak occurred later in early June and the onset and recession of freshet was more gradual. Vessel generated waves can impact shoreline intertidal habitats, but the increasing river discharge and water levels may also be negative factors, and both may act synergistically to impact vegetation coverage at the Glenrose Cannery site.



**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**



**Photo 9. Downstream section of Cannery West constructed marsh bench.**



**Photo 10. Upstream section of Cannery West with dense marsh.**



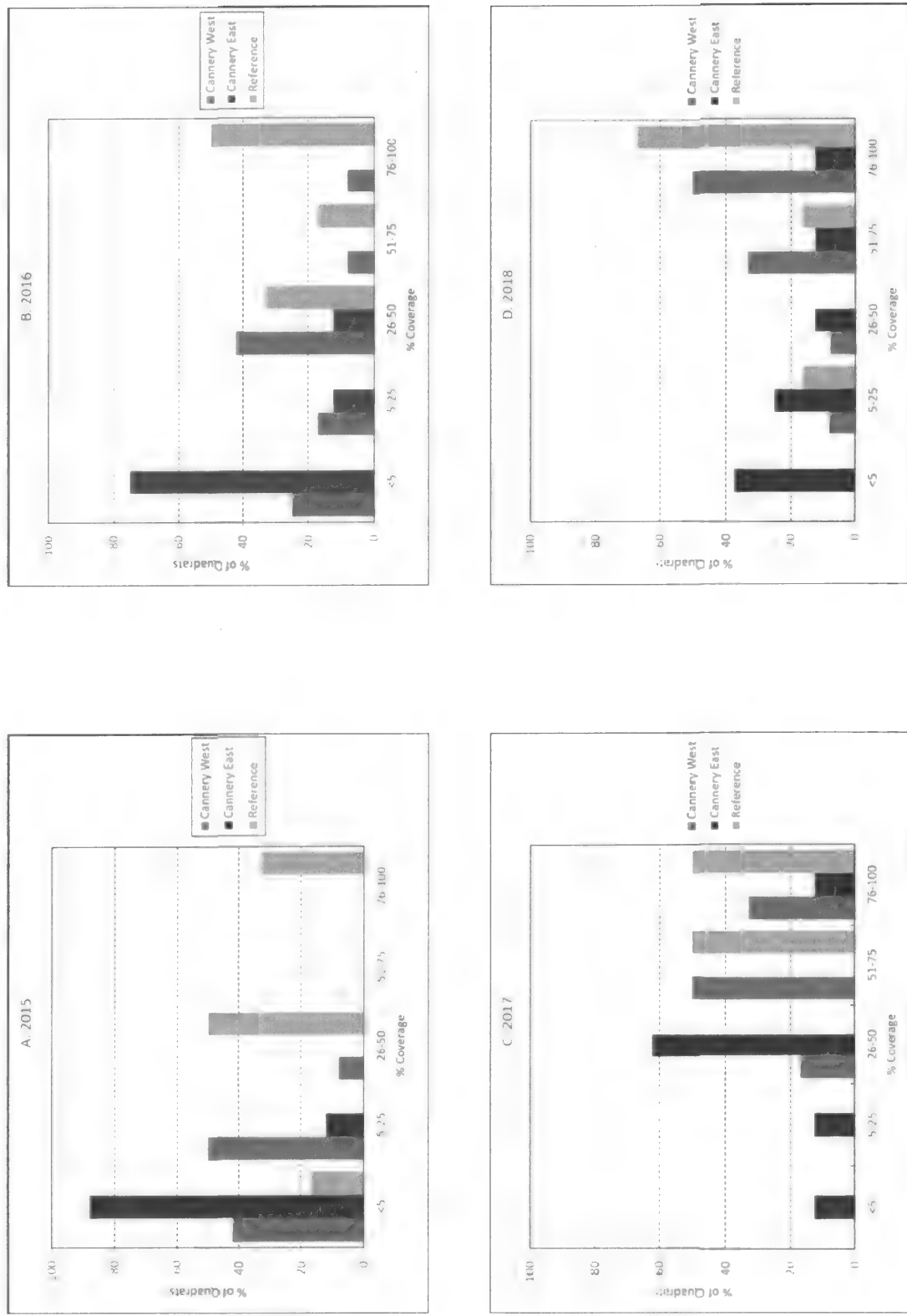
**Photo 11. Cannery East constructed marsh bench with heavy scour.**



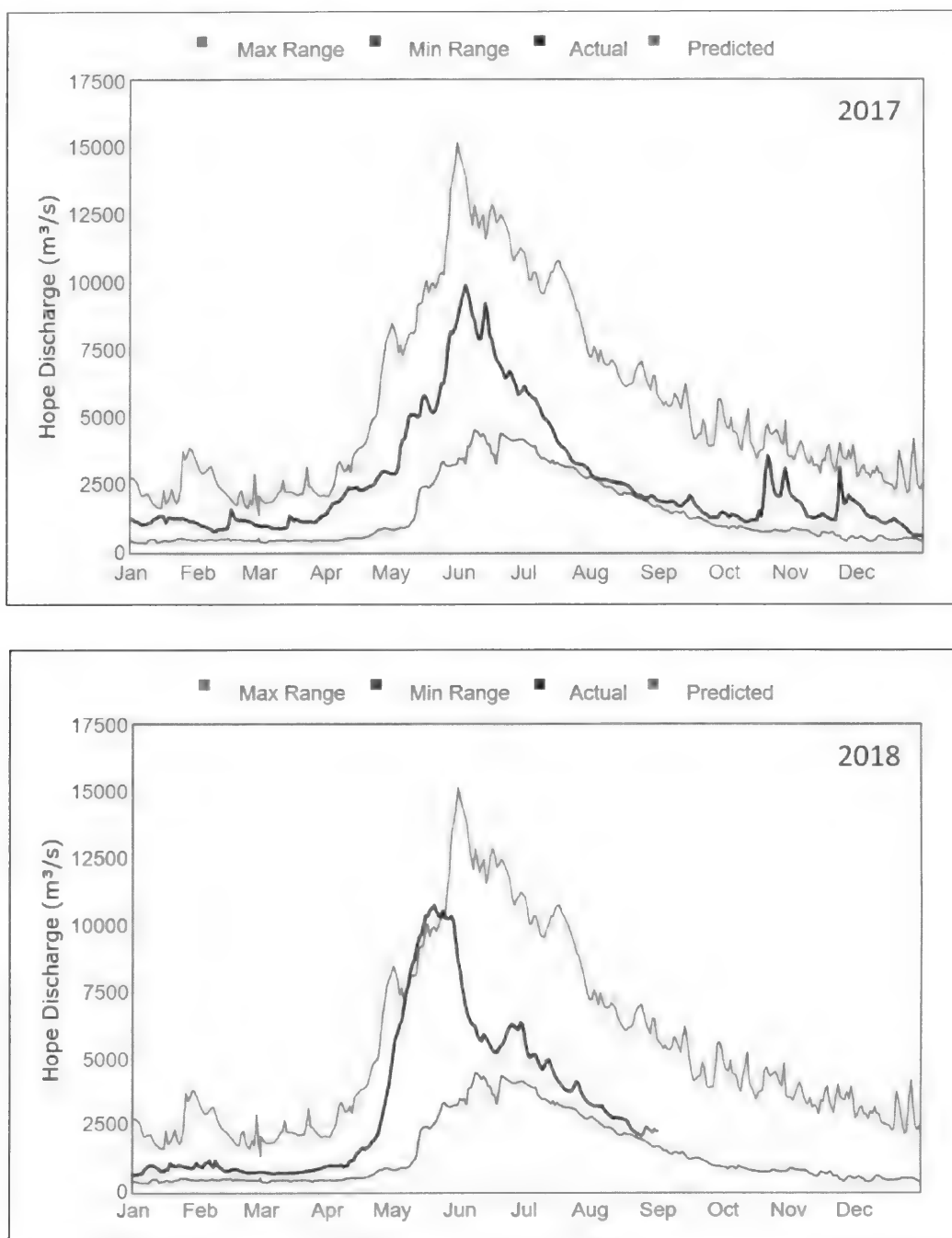
**Photo 12. Cannery reference marsh located upstream of site.**

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**



**Figure 6** Glenrose Cannery marsh plant coverage trends from 2015-2018.



**Figure 7** Fraser River hydrographs for 2017 and 2018 showing freshet patterns (Source: Avadept: [http://www2.pac.dfo-mpo.gc.ca/avdpth\\_srch-eng.html?page=frh](http://www2.pac.dfo-mpo.gc.ca/avdpth_srch-eng.html?page=frh)).

The Glenrose Cannery constructed marshes had higher plant diversity than the reference marsh in July 2018 with 25 species compared to 13 in the reference (**Table 2; Appendix A, Tables A-2 and A-4**). Lyngbye's sedge and Baltic rush, both transplanted species, and pondweed, a naturally recruited species were the most frequently recorded in the constructed marshes. In the reference marsh, six species, including jointed rush, Douglas' aster, American bugleweed, reed canary grass, Baltic rush and water forget-me-not, were most frequently recorded.

Lyngbye's sedge maximum blade length was measured in both the constructed and reference marsh quadrats. Both marshes had low sedge blade lengths of 63 cm for the reference and 46 cm of the constructed marshes. These data indicate that Canada Geese grazing occurred in both the Cannery constructed and reference marsh but was more intense in the easily accessible constructed marshes, where the sedge occurred at lower elevations and the vegetation was more open.

The Glenrose Cannery constructed marshes are narrow and exposed to river processes. The marsh rock berm was observed to be stable and functioning as designed. The West Cannery marsh bench had a gentle slope from 0.4 m GD near the berm crest up to 0.5 m to 0.9 m GD at the toe of shoreline armouring (**Figure 3**). Cannery East was slightly higher ranging from 0.7 m GD to 1.0 m GD. The Reference marsh ranged from 0.4 m GD to 1.1 m GD. Cannery East is more exposed and the marsh bench experiences substantial scour, while Cannery West marsh bench is more protected and experiences less scour. The vegetation coverage was higher at Cannery West than Cannery East. The lowest elevations in the constructed and reference marsh were colonized by Baltic rush, while sedge, grasses and herbaceous species dominated the high marsh.

A few logs were observed in the Cannery constructed and reference marshes. The marshes are quite linear and open, and exposed to vessel-generated waves and floating logs. However, the logs do not appear to accumulate, and are most likely transported off the marsh during large tides during the winter.

The constructed intertidal benches are providing several ecological functions for fish, including feeding, refuge, and rearing areas for juvenile salmon. The productivity increases where intertidal marsh vegetation has established (e.g. the reference marsh and Cannery West). In Cannery East, the limited vegetation cover reduces the habitat productivity, resulting in lower input of organic matter and nutrients to the detritus food web that includes invertebrates providing food for juvenile salmonids and other fishes.

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**

**Table 2 Frequency of occurrence (%) of marsh species in quadrats sampled at Glenrose Cannery constructed and reference marshes on July 26, 2018.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Constructed	Reference
<i>Agrostis stolonifera</i>		15	
<i>Bidens cernua</i>	nodding beggarticks	10	
<i>Callitriche stagnalis</i>	water starwort	20	
<i>Carex lyngbyei</i> *	Lyngbye's sedge	55	33
<i>Daucus carota</i>	Queen's Anne's lace	5	
<i>Eleocharis palustris</i> *	spikerush	5	
<i>Iris pseudacorus</i>	yellow flag		17
<i>Juncus acuminatus</i> *	tapered rush	30	
<i>Juncus arcticus</i> *	Baltic rush	45	50
<i>Juncus articulatis</i>	jointed rush	20	87
<i>Juncus effusus</i>	common rush	10	
<i>Lilaeopsis occidentalis</i>	lilaeopsis	15	17
<i>Limosella aquatica</i>	water mudwort	15	
<i>Lycopus americanus</i>	bugleweed	20	67
<i>Lysimachia vulgaris</i>	garden yellow loosestrife		33
<i>Lythrum salicaria</i>	purple loosestrife	5	17
<i>Mentha aquatica.</i>	Spearmint	10	
<i>Myosotis scorpioides</i>	water forget-me-not		50
<i>Phalaris arundinacea</i>	reed canarygrass	35	67
<i>Plantago sp.</i>	plantain	5	
<i>Polygonum sp.</i>	pondweed	55	
<i>Potentilla anserina</i>	Pacific silverweed	5	
<i>Rumex acetosella</i>	sheep sorrel		17
<i>Salix sp.</i>		5	
<i>Symphotrichum_subspicatum</i>	Douglas' aster	10	67
<i>Taraxacum officinale</i>	dandelion	5	
<i>Trifolium sp.</i>	clover	5	
	uniden. grass	5	17
	uniden. herb	5	

\* Denotes a transplanted species

### **3.3 GUNDERSON SLOUGH MUDFLAT TIDAL MARSH SITE**

Vegetation establishment was assessed on July 26, 2018 at the Gunderson Slough Mudflat tidal marsh bench and reference marsh (**Figure 4**). An engineering assessment was conducted on August 15. Both the assessments were supported by a GPS RTK survey conducted on July 25, 2018. The quadrat sampling data are shown in **Appendix A Tables A-3 and A-4**. The biological and engineering assessments also included the supplemental planting and Nelson View Creek experimental bank stabilization completed in April 2018.

Marsh vegetation covered much of the constructed Gunderson constructed marsh bench (**Photo 13**). Plant coverage ranged from nil at the lower downstream edge (**Photo 14**) to dense within the fenced enclosures and interior of the marsh (**Photo 13**). Transplanted marsh species occurred within the fenced enclosures not impacted by Canada geese grazing, and naturally recruited species predominated the vegetation cover outside the enclosures. The reference marsh situated along the toe of the shoreline bank armouring and south of the constructed marsh had dense vegetation coverage (**Photo 15**).

Logs have accumulated along the toe of the shoreline bank armouring behind the reference marsh (**Photo 16**). Logs commonly occur in natural and constructed marshes in the Fraser River estuary and can become an issue if they accumulate and smother marsh vegetation. Several logs were stranded within the constructed marsh and were removed during the ongoing VFPA maintenance program because they damage the fenced enclosures. Large, stable logs can provide habitat features in the marsh, such as the large root wad that has been deposited in the Nelson View Creek discharge channel

The habitat design for the Gunderson Slough Mudflat intertidal marsh bench included an unprotected edge to allow unrestricted fish access and natural fluvial physical processes to occur. Post-construction monitoring has documented erosion and transport into the marsh of a temporary sand-gravel berm installed along the river edge to contain material placed during construction. In July 2018, it was observed that a layer of fines now covered the leading edge of the sand gravel material that had been transported into the marsh enclosures by vessel-generated waves (**Photo 17**). Along the river edge, all the sand-gravel material has been transported landward leaving a silty sand substrate that is being colonized by a benthic algae/diatom community (**Photo 18**). A gentle gradient has formed along the river edge from the action of vessel-generated waves and some of the finer sediments may be continued to be mobilized depending on the size and velocity of the incoming waves.

Water discharge from Nelson View Creek has scoured a deep, meandering channel up to 1 m deep in the constructed marsh bench (**Photo 19**). Further upstream, a wide, braided channel from McAdams Creek has formed immediately upstream of the constructed marsh (**Photo 20**). However, it appears that the

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**



Photo 13. Constructed marsh bench looking downstream showing marsh establishment.

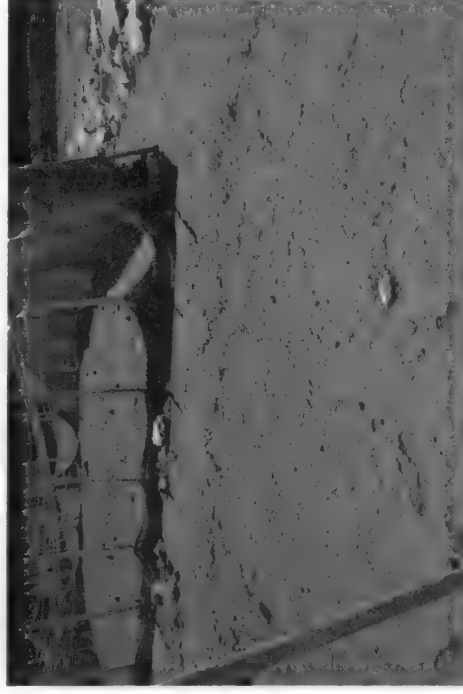


Photo 14. Unvegetated mud at lower downstream marsh bench.



Photo 15. Dense transplanted vegetation growth in enclosure.



Photo 16. Log accumulation along toe of bank south of reference marsh.

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**



**Photo 17. Layer of fines covering sand berm material.**



**Photo 18. Benthic algae growing along upper slope along the Fraser River.**



**Photo 19. Nelson View Creek discharge channel in constructed marsh.**



**Photo 20. McAdam Creek discharge channel upstream of rock groin with main flows along right bank and away from groin.**



main flows are along the right bank, which curve downstream away from the rock groin, and do not pose an immediate threat to undercutting the groin. The channels will continue to be monitored.

In 2018, there was a slight net increase in the coverage with approximately 70% of the sampled quadrats having dense or moderately dense coverage compared with 55% in 2017 (**Figure 8; Appendix A, Table A-3 and A-4**). Most of the dense coverage from transplanted vegetation occurred within the fenced enclosures and from naturally recruited species outside the enclosures. The reference marshes, located closer to shore and at higher elevations, had dense coverage (**Figure 8; Appendix A, Table A-4**).

Marsh plant species diversity was similar in the constructed (15 species) and reference (16 species) marshes (**Table 3; Appendix A, Table A-4**). The most frequently recorded plant species in the constructed marsh were water starwort, tapered rush, and pondweed, all naturally recruited species. In the reference marsh, Lyngbye's sedge, reed canary grass, and Douglas' aster were the most frequently recorded. The taller emergent plants selected for transplanting such as Lyngbye's sedge, bulrush, and cattail, etc., provide a more structural element to the marsh and higher productivity.

The sand gravel berm material continued to be mobilized and advance landward. In July 2018 the sand gravel berm covered most of area within enclosures E1 and E2 installed in 2016 (see **Figure 4**). The leading edge of the material was now covered with mud and recruited marsh plant species were observed growing on the surface while transplanted species that were previously covered had grown through the substrate (see **Photo 17**).

The slope of the river edge appeared to be reduced and included benthic algae growing on the mud-sand substrate between 0.0 m GD and -0.2 m GD elevations (see **Figure 4**). Below the zone of benthic algae, the substrate was sand and appeared to be more mobile (i.e. small sand waves and ripples).

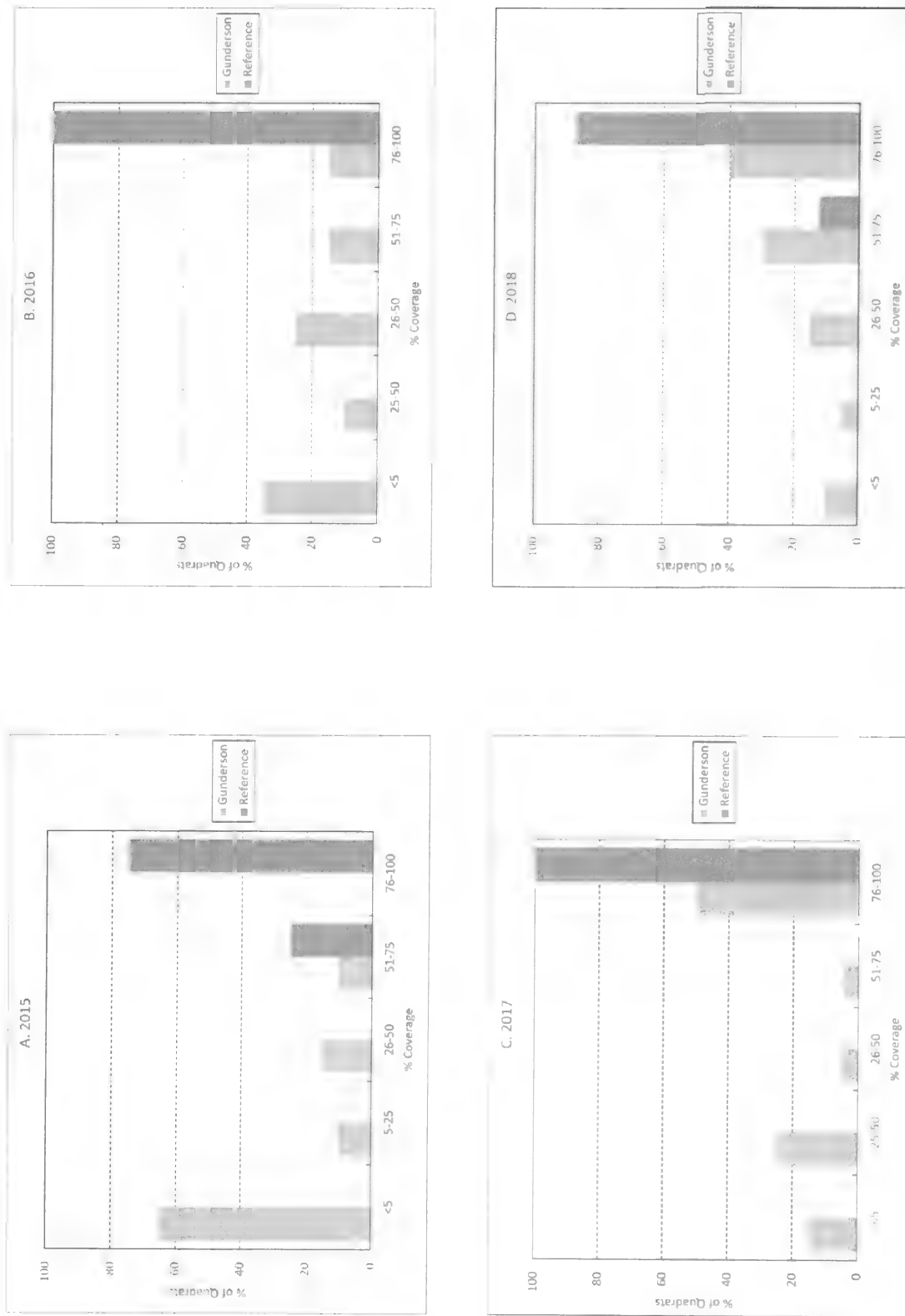
In 2018, alternate enclosure design using three natural fabrics (i.e. coir mat, jute fabric, and burlap fabric) was tested. Similar to previous trials, ropes were strung from the posts across the top to prevent geese from flying into the enclosures. The fabric fencing failed under the river current and tidal action and was unsuccessful in preventing geese access (**Photo 21**). The fabric also caused scour along the bottom edge of the fabric, resulting in a trench along the bottom of the enclosure (**Photo 22**). Another component of the 2018 experimental project was to test bank stabilization methods in the Nelson View Creek tidal channel. This included covering the bed and banks of the channel with erosion fabric and using wood or live willow stakes (**Photo 23**). Marsh vegetation was also transplanted but did not survive, possibly because the elevation was too low. The willow is surviving, but leaf growth is at the top of the planted stakes, suggesting that the elevations are too low. The VFPA maintenance contractor, Inlailawatash ILP, will be removing any failed materials in the spring 2019 as part of the regular maintenance work.

Marsh vegetation is expanding out from the reference marsh, with spikerush being the predominant species. The enclosures are also providing shelter from vessel-generated waves and marsh vegetation coverage is increasing behind them.

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**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**



**Figure 8** Glenrose Gunderson Slough Mudflat marsh plant coverage trends from 2015 to 2018.

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**

**Table 3      Frequency of occurrence (%) of marsh species in quadrats sampled at Gunderson Slough Mudflat and reference marshes on July 26, 2018.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Constructed	Reference
<i>Alisma plantago-aquatica</i>	water-plantain	5	
<i>Bidens cernua</i>	nodding beggarticks		13
<i>Callitriche stagnalis</i>	water starwort	70	13
<i>Carex lyngbyei</i> *	Lyngbye's sedge	30	88
<i>Crassula aquatica</i>	pigmyweed	15	13
<i>Eleocharis palustris</i> *	spikerush	20	25
<i>Isolepis cernua</i>	low clubrush	35	
<i>Juncus arcticus</i> *	Baltic rush	15	
<i>Juncus articulatis</i>	tapered rush	70	75
<i>Juncus effusus</i>	common rush		
<i>Lilaeopsis occidentalis</i>	lilaeopsis		25
<i>Limosella aquatica</i>	mudwort	40	
<i>Lycopus americanus</i>	American bugleweed		50
<i>Lythrum salicaria</i>	purple loosestrife	15	50
<i>Myosotis scorpioides</i>	water forget-me-not	5	50
<i>Phalaris arundinacea</i>	reed canarygrass	5	100
<i>Polygonum sp.</i>	pondweed	70	13
<i>Potentials anserina</i>	Pacific silverweed		13
<i>Ranunculus sp.</i>	buttercup		13
<i>Schoenoplectus acutus</i> *	hardstand bulrush	5	
<i>Symphyotrichum subspicatum</i>	Douglas' aster		88
<i>Typha latifolia</i> *	common cattail	20	
	uniden. herb		25

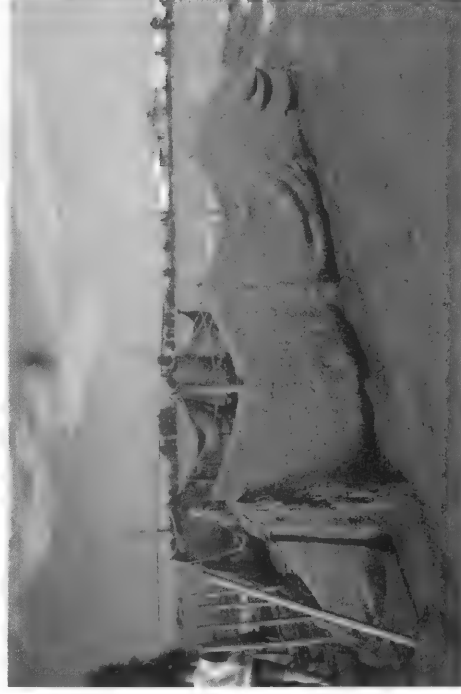
\* Denotes a transplanted species

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**



**Photo 21. Failed fabric fencing trial enclosure observed in July.**



**Photo 22. Fabric enclosure caused scour at base of enclosure.**



**Photo 23. Nelson Creek trial bank stabilization trial observed in July 2018.**



**Photo 24. Roped enclosure with grazed transplants.**

Marsh elevations measured in July 2018 ranged from 0.2 m GD along the rivers edge to 1.1 m GD at the edge of the natural reference marsh (**Figure 4**). The marsh elevation at the lower limit (i.e. along the river edge) of transect T1 located at the downstream boundary of the marsh bench was 0.1 m GD and no emergent plants were recorded. The sand-gravel berm reached the southern limit of enclosure E1 by July 26 and had a crest maximum elevation of approximately 0.8 m GD and a toe elevation within the existing marsh surface ranging from 0.3 to 0.6 m GD. Advancement of the berm crest from 2015 ranged from approximately 6 m at the upstream end to 20 m in enclosures and 25 m at its furthest point west of enclosure E1.

The tidal channel formed by discharge from Nelson View Creek was measured to be -0.46 m GD at its deepest point and top of bank at 1.2 m GD closest to shore. The experimental bank stabilization works have resulted in sediment accumulation and covering of the erosion fabric installed in the channel in April 2018. However, the channel has only experienced low summer flows and winter flows will be much higher. It will be interesting to monitor the channel during large winter flows to observe the behaviour of the stabilization measures and see if the erosion fabric will remain in place.

The constructed marsh habitat is providing rearing and feeding areas for juvenile salmon and other fishes, as well as several species of water birds. Heavy grazing by Canada geese has restricted the establishment of transplanted marsh species but naturally recruited plant species such as water starwort and rushes, which are not grazed by the geese, have colonized much of the site. These plant species are supporting a detritus-based food web and providing vegetated cover for invertebrates that provide food for fish utilizing the shoreline habitats. The outer fenced enclosures installed along the river edge have resulted in dense growth of transplanted and naturally recruited species. The plastic fenced enclosures are successful in restricting Canada geese from grazing the plants and the large enclosures with full vegetation growth provide shelter from vessel-generated waves.

## **4.0 SUMMARY AND RECOMMENDATIONS**

The three marsh designs incorporated in the Glenrose site clearly show the influence of fluvial processes on the performance and success of intertidal habitat construction. Incorporation of full engineering and biological criteria resulted in fully functional and stable habitat at the Downstream marsh, and more challenges with the approaches used at the Cannery and Gunderson sites under the dynamic, ambient conditions. Scour from vessel-generated waves and Canada geese grazing are two of the primary factors that need to be addressed in establishing stable, fully functional marsh.

The Glenrose constructed marshes have had variable success in establishing intertidal marsh. The Downstream marsh bench is very successful, with full coverage by the transplanted marsh species. Cannery marsh has resulted in well established marsh in most of the downstream areas (i.e. Cannery West) that are not exposed to scour and loss of placed soil over the riprap apron. In contrast, the upstream areas (i.e. Cannery East) experiences heavy scour and much of the placed soil has been removed. Gunderson's unprotected river edge has resulted in very dynamic conditions with modification of the steep bank to a gently sloping edge. Intense grazing by Canada geese has led to poor transplant success, but subsequent mitigation using fenced enclosures has led to successful vegetation establishment. The enclosures also provide shelter for interior marsh vegetation, which has increased vegetation coverage.

Plant diversity in the constructed marshes is greater than the reference marshes; 35 to 27 species (**Table 4**). Transplanted species Lyngbye's sedge, Baltic rush, and pondweed were the top three most frequently recorded species in the constructed marshes. Lyngbye's sedge, red canary grass, water forget-me-not, Douglas' aster, and jointed rush were the top three most frequently recorded species in the reference marshes. The reference marshes are more mature marshes, with established communities, while the constructed marshes had only four growing seasons and many species were naturally recruited from surrounding areas.

Natural recruitment of plant species improved plant coverage at all three of the constructed marsh sites. However, natural recruitment may include low ground cover species such as water starwort and water forget-me-not as well as more desirable species such as jointed rush. Transplanting has the advantage of using preferred native species that provide more productive habitat (e.g. higher productivity and taller plants) that may provide improved habitat structure for fish and wildlife, increase distribution of endangered or restricted species, and encourage growth of plants with specific functions or attributes for the site). However, depending on the proximity to natural marsh areas or the supply of seeds and plant fragments into the constructed marsh site, natural recruitment can be an effective factor in vegetation establishment at the site. Monitoring is useful in ensuring that invasive species do not infest the site since they tend to proliferate more rapidly than native species in disturbed areas or on newly placed soil.

**GLENROSE TIDAL MARSH PROJECT  
FOURTH YEAR MONITORING REPORT**

**FINAL  
NOVEMBER 2018**

**Table 4 Frequency of occurrence (%) of marsh species in quadrats sampled at Downstream, Cannery, and Gunderson constructed marshes and reference marshes in July 2018.**

Species		% Frequency of Occurrence	
Scientific Name	Common Name	Constructed	Reference
<i>Agrostis stolonifera</i>	creeping bentgrass	5	
<i>Alisma plantago-aquatica</i>	water plantain	9	10
<i>Bidens cernua</i>	nodding beggarticks	13	15
<i>Callitriche stagnalis</i>	common water starwort	32	15
<i>Caltha palustris</i>	yellow marsh marigold		10
<i>Carex lyngbyei</i> *	Lyngbye's sedge	57	70
<i>Crassula aquatica</i>	pigmyweed	3	5
<i>Daucus carota</i>	Queen Anne's lace	1	
<i>Eleocharis palustris</i> *	spikerush	8	20
<i>Equisetum fluviatile</i>	swamp horsetail		20
<i>Iris pseudacorus</i>	yellow flag		5
<i>Isolepis cernua</i>	low clubrush	12	5
<i>Juncus acuminatus</i> *	tapered rush	12	
<i>Juncus arcticus</i> *	Baltic rush	53	20
<i>Juncus articulatis</i>	jointed rush	32	55
<i>Juncus effusus</i>	common rush	8	
<i>Juncus oxymeris</i>	pointed rush		10
<i>Lilaeopsis occidentalis</i>	lilaeopsis	8	20
<i>Limosella aquatica</i>	mudwort	18	5
<i>Lycopus americanus</i>	American bugleweed	8	50
<i>Lysimachia vulgaris</i>	garden yellow loosestrife		20
<i>Lythrum salicaria</i>	purple loosestrife	8	5
<i>Mentha aquatica</i>	spearmint	1	
<i>Mimulus gottatus</i>	yellow monkey flower	1	
<i>Myosotis scorpioides</i>	water forget-me-not	1	60
<i>Phalaris arundinacea</i>	reed canarygrass	15	70
<i>Plantago sp.</i>	plantain	1	
<i>Polygonum sp.</i>	pondweed	43	15
<i>Potentilla anserina</i>	Pacific silverweed	1	5
<i>Ranunculus sp.</i>	buttercup	1	5
<i>Rumex acetosella</i>	sheep sorrel	1	5
<i>Sagittaria latifolia</i> *	arrowhead	1	
<i>Salix sp.</i>	willow	1	
<i>Schoenoplectus acutus</i>	hardstem bulrush	1	
<i>Symphyotrichum subspicatum</i>	Douglas' aster	1	60
<i>Taraxacum officinale</i>	dandelion	1	
<i>Trifolium sp.</i>	clover	1	
<i>Typha latifolia</i> *	common cattail	10	20
	unidentified grass	1	
	unidentified herb	1	10

\* DENOTES A TRANSPLANTED SPECIES



The large-scale enclosures at the Gunderson Slough Mudflat site were successful in eliminating geese access into the transplant area and plants grew without impact from grazing, similar to the results of the smaller enclosures erected in 2015. Large-scale enclosures offer shelter and protection from wind and waves for establishing marsh vegetation, both inside and in the lee of prevailing physical forces. This was shown by the rapid expansion of marsh vegetation behind the marsh enclosures from the reference marsh and from natural recruitment of rush and other species in the upstream section of the marsh. Strategic use of enclosures may be useful to establish marsh vegetation in more exposed locations or larger sites.

The planting and bank stabilization at Glenrose Gunderson have been useful in testing alternative approaches and confirming optimum methodology. However, some trials (e.g. fabric fencing) has resulted in poor results and the coir mat blanket stabilization of Nelson View Creek may lead to possible issues under large winter discharges. Complicated planting plans require more time and effort to install and may not be warranted in larger sites where plant volumes are much larger and planting production needs to be high. Intertidal marsh distribution tends to form bands based on tidal inundation, governed by elevations, and growth characteristics of the plant species.

Overall, monitoring observations and data collection to-date indicate that the constructed habitats are providing fish habitat as intended. The vegetated habitats at the Downstream site, Cannery West, and Gunderson are supporting densely vegetated areas providing better feeding, rearing and cover areas for juvenile salmonids compared to the pre-construction habitats.

Based on the monitoring results obtained during the VFPA monitoring program the following recommendations are provided below.

#### 1. Monitoring Program

- The Downstream marsh has reached a successful endpoint with full marsh vegetation coverage equivalent to the reference marsh and detailed monitoring is no longer required. Annual inspections should continue to document the status of the site and need for any remedial measures;
- The Cannery site is showing promising vegetation trends in Cannery West, but much more gradual progress in Cannery East. Detailed monitoring should continue to document successful plant establishment equivalent to the reference marsh. Dense coverage may not be achievable with the rock apron, so the endpoint may be less than dense (i.e. 76-100%) coverage and comparable to the reference marsh that has similar site conditions;

- Gunderson site is progressing but is influenced by biological and physical processes and detailed monitoring should be continued. Of interest are the behaviour of the river edge, including sediment mobilization, slope gradient, and biological response (e.g. benthic algae on slope, and emergent vegetation on marsh bench), tidal channel development at Nelson View Creek and McAdam Creek). Canada geese may continue to be an issue and further monitoring and research would likely benefit management options.

## **2. Maintenance**

- Plastic fenced enclosures appear to be the most efficient method for protecting transplanted marsh vegetation from geese grazing. Based on results to date, dense vegetation results in approximately 3 years (e.g. 2016-2018 for E1 and E2; Downstream marsh results). Removing the fencing is recommended after three years but geese grazing along the edge should be monitored. VFPA's maintenance contractor, the Inlailawatash ILP, will conduct maintenance in the spring of 2019 to address accordingly.
- Fenced enclosures require maintenance from logs damage over the life of service, e.g. 3 years. Log damage results in holes or openings in the fence and allows geese access into the enclosures to graze the marsh plants; Maintenance is also required to maintain ropes and fencing (i.e. from sagging or detachment from posts);
- Purple loosestrife has invaded all three marsh sites and it is recommended that plants be removed as part of the annual maintenance program. Manual pulling or using mechanical methods (e.g. weed wrench) are labour intensive but efficient with new invasive plants. Larger populations require more effort and costs. All removed plants should be appropriately disposed of offsite. The optimum time for removals is in late summer when the plants are in flower and prior to setting and releasing seed. Removal of purple loosestrife will help to encourage establishment of more desirable marsh species and prevent purple loosestrife from spreading and becoming dominant. It is anticipated that this will be part of the Inlailawatash ILP's spring 2019 maintenance work.
- Winter monitoring of the Nelson View Creek at the Gunderson site is recommended to observe the behaviour of the coir mat blanket. Should the blanket be dislodged during heavy discharges from the culvert, it could cause further bank destabilization of the tidal channel and or fencing,

## **5.0 LITERATURE CITED**

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## **Appendix A – 2018 Intertidal Marsh Vegetation Data**

Coverage data are presented as individual species coverage class/whole quadrat class (i.e. 1/5)

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**Table A-1. Glenrose Downstream vegetation quadrat coverage and species percentage frequency of occurrence on July 26, 2018.**

[illegible]

Note: \* Denotes transplanted species

**Table A-2. Glenrose Cannery vegetation quadrat coverage and species percentage frequency of occurrence on July 26, 2018.**

Species	Common Name	Quadrat																% Frequency				
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16		C17	C18	C19	C20
<i>Agrostis stolonifera</i>	creeping bentgrass	1/4	1/2	2/4													*					15
<i>Bidens cernua</i>	nodding beggarticks	1/4					1/5															10
<i>Callitriche stagnalis</i>	water starwort	1/2	1/3	1/5																		20
<i>Carex lyngbyei</i> *	Lyngeby's sedge	4/4	1/2	2/4	2/5	1/4	2/5	1/4	2/5	2/4					1/1		NP	2/2	1/2			55
<i>Daucus carota</i>	Queen Anne's lace											2/4										5
<i>Eleocharis palustris</i> *	spikerush	1/4			1/5			3/4	1/5	2/4	1/5											5
<i>Juncus acuminatus</i> *	laperled rush					5/5	3/5	1/4	5/5													30
<i>Juncus articulatus</i> *	Belted rush	1/2	3/3		4/5		2/5				5/5	1/4			1/1		5/5			3/3		45
<i>Juncus articularis</i>	jointed rush			4/4	1/5															1/2		20
<i>Juncus effusus</i>	common rush																					10
<i>Lilleopsis occidentalis</i>	lilleopsis								1/5	1/4							1/5					15
<i>Limosella aquatica</i>	water mudwort	1/4			1/5			1/5	1/4		1/4	1/5										20
<i>Lycopodium</i> sp.	bugleweed							1/5	1/4													5
<i>Lythrum salicaria</i>	purple loosestrife				1/5																	10
<i>Mertensia spicata</i>	spearmint			1/4																		5
<i>Phalaris arundinacea</i>	reed canarygrass	1/4		1/4			1/5	2/4	3/5	1/4		2/4								1/3		10
<i>Piantago</i> sp.	plantain																					5
<i>Polygonum</i> sp.	Persicaria																					5
<i>Potamogeton</i> sp.	spotted	1/4	1/2	1/3	1/4	1/5	1/5	1/4	1/4	1/4	1/4	1/4			1/1		1/5			1/3		55
<i>Potamogeton</i> sp.	Pacific silverweed																					5
<i>Salix</i> sp.	willow											2/4										10
<i>Symphoricarum subspicatum</i>	Douglas aster			1/4	1/5							1/4										5
<i>Taraxacum officinale</i>	dandelion											1/4			1/1				1/2			5
<i>Trifolium</i> sp.	uniden grass																					5
	unidentified herb																					5
	unidentified herb																					5

Note: \* Denotes translocated species.

**Note: \* Denotes transplanted species**



**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING REPORT**

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NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING  
FINAL REPORT**

**JANUARY 17, 2019**



**GL Williams  
& Associates Ltd.**



**moffatt & nichol**

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HABITAT ENHANCEMENT PROGRAM  
NEW BRIGHTON PARK  
SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING  
FINAL REPORT**

**Prepared for:** Vancouver Fraser Port Authority  
Habitat Enhancement Program  
100 The Pointe, 999 Canada Place  
Vancouver, BC Canada  
V6C 3T4

**Prepared by:** [REDACTED]  
GL Williams & Associates Ltd.  
2907 Silver Lake Place  
Coquitlam, B.C.  
V3C 6A2

[REDACTED]  
Moffatt & Nichol  
301-777 W. Broadway  
Vancouver, BC  
V5Z 4J7

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**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING REPORT**

**FINAL  
JANUARY 2019**

**TABLE OF CONTENTS**

<b>1.0 INTRODUCTION.....</b>	<b>1</b>
<b>2.0 MONITORING PROGRAM METHODS.....</b>	<b>5</b>
2.1 Marsh Vegetation .....	5
2.2 Backshore and Riparian Tree and Shrub Planting.....	7
<b>3.0 RESULTS .....</b>	<b>8</b>
3.1 Tidal Channel Habitat.....	8
3.2 Mudflat.....	10
3.3 Salt Marsh .....	12
3.4 Backshore Plantings.....	16
3.5 Creek Connection.....	19
<b>4.0 SUMMARY AND RECOMMENDATIONS.....</b>	<b>21</b>
<b>5.0 LITERATURE CITED.....</b>	<b>23</b>

**LIST OF TABLES**

Table 1	Frequency of occurrence (%) of marsh species recorded in island, east bank, west bank and reference marshes on August 22, 2018 .....	15
Table 2	Percentage (%) survival of tree and shrub backshore plantings surveyed on August 23 and 24, 2018.....	16
Table 3	Percentage (%) survival of tree and shrub riparian plantings surveyed on August 23, 2018. 19	19

**LIST OF FIGURES**

Figure 1	Location of New Brighton Park Shoreline habitat restoration project and Maplewood reference marsh. ....	2
Figure 2	Aerial of New Brighton Park Shoreline Habitat Restoration Project on May 2018 following completion of construction and upland and salt marsh plantings. (Photo: VFPA 2017.).....	4
Figure 3	New Brighton Park Shoreline Habitat Restoration Project constructed site plan showing location of intertidal salt marsh transects. ....	6
Figure 4	Salt marsh vegetation coverage at constructed and reference marshes on August 22, 2018. ....	14

**APPENDICES**

Appendix A – Habitat Record Drawings .....	24
Appendix B – 2018 Intertidal Salt Marsh Vegetation Data .....	33
Appendix C – 2018 Backshore Trees and Shrubs Data .....	36

## **1.0 INTRODUCTION**

Construction of the Vancouver Fraser Port Authority (VFPA) New Brighton Park Shoreline Habitat Restoration Project (**Figure 1**) to restore fish and wildlife habitat in Burrard Inlet, began in September 2016 and ended with completion of the intertidal salt marsh and backshore nursery stock plantings in June 2017. Supplemental salt marsh planting of saltgrass and arrowgrass, which were not available from the nursery in 2017, was conducted in late May 2018.

The VFPA's Habitat Enhancement Program (HEP) and the Vancouver Board of Parks and Recreation (VBPR), in collaboration with Musqueam, Squamish and Tsleil-Waututh Nations, worked together to deliver the project.

The Project resulted in conversion of a historic industrial infilling into productive fish and wildlife habitat that will benefit juvenile Pacific salmon, as well as other fish species, birds, and wildlife utilizing Burrard Inlet. Over 90% of the natural shoreline in the central harbour between First and Second Narrows in Burrard Inlet has been developed for industrial and port operations (BIEAP 2009). The construction of salt marsh and backshore habitat is supported by Fisheries and Oceans national fish habitat policy (1986) and is an important management effort for supporting Pacific salmon. Providing productive rearing habitat has shown to increase marine survival and improve fitness of returning adult salmon to spawning grounds, providing benefits to marine mammals as well as commercial, sport and Aboriginal fisheries. The project recently received a gold rating under the Stewardship Centre for B.C.'s Green Shores® for Coastal Development program, which demonstrates the highest possible achievement of project environmental goals and leadership in shoreline stewardship.

The VFPA New Brighton Shoreline Habitat Restoration Project was designed by Moffatt & Nichol (engineering), GL Williams & Associates Ltd. (biological) and Connect, (upland landscaping and park and park public amenities). The final design built on previous work conducted by the VBPR to daylight Renfrew Creek and construct salt marsh habitat as part of the Hastings Park/Pacific National Exhibition Master Plan (2011). Renfrew Creek has been daylighted from Sanctuary Pond in Hastings Park to New Brighton Road as part of Creekway Park. VFPA initiated discussions with VBPR in the fall of 2013 on several habitat enhancement projects within the City of Vancouver, including New Brighton Park, and fact sheets were prepared by GL Williams & Associates in January 2014 outlining potential habitat enhancement options and preliminary site survey studies required. Following VBPR approval of the joint project with VFPA in May 2015, site surveys were conducted by Hemmera (i.e. SCUBA diving reconnaissance of nearshore subtidal habitat in Burrard Inlet and ornithological surveys) and intertidal and backshore shoreline habitats by Hemmera and GL Williams & Associates. The results of these surveys were reported in the Ecological Conditions report prepared by Hemmera (2015) and have been incorporated into this report.



Figure 1 Location of New Brighton Park Shoreline habitat restoration project and Maplewood reference marsh.  
(Source: Google Earth, imagery date July 22, 2018)

**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING REPORT**

**FINAL  
JANUARY 2019**

The New Brighton Park Shoreline Habitat Restoration Project converted infilled land into a tidal basin compete with mudflat and salt marsh habitats joined to Burrard Inlet by two tidal openings at the northwest and northeast corners of the site. The dual outlet design provides improved hydraulic flushing to improve water quality, reduces channel scour during outflow drainage from the basin, creates a tidal island offering an enhanced protected habitat features for fish and wildlife, and provides prime quality habitat for Burrard Inlet fishes and invertebrates, including juvenile salmonids. The design also includes a cobble lined channel with riparian plantings connecting Creekway Park and the salt marsh, which provides a landscape link of the former Renfrew Creek that flowed into Burrard Inlet adjacent the west opening. Backshore beach grass meadow and coastal shrubs and trees are also included in the design to provide enhanced fish and wildlife habitat. The construction and plantings were completed in July 2017 (**Figure 2**).

This report provides a summary of the monitoring surveys conducted in August 2018. The monitoring was a requirement of the Habitat Enhancement Program (HEP) Post-Construction Monitoring Plan (PCMP) submitted by VFPA to Fisheries and Oceans Canada (DFO) in March 2015, and is in alignment with the 2012 "Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank between DFO and VFPA.

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**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING REPORT**

**FINAL  
JANUARY 2019**



**Figure 2** Aerial of New Brighton Park Shoreline Habitat Restoration Project on May 2018 following completion of construction and upland and salt marsh plantings. (Photo: VFPA 2017.).

## 2.0 MONITORING PROGRAM METHODS

The 2018 monitoring program of the New Brighton Park Shoreline Habitat Restoration Project was conducted August 22-24, 2018. The program included engineering assessment of constructed habitats by [REDACTED] Moffatt & Nichol, at low tide on August 22, vegetation surveys to document the establishment of intertidal (i.e. low tide on August 22) and backshore (August 23 and 24) plantings By [REDACTED], GL Williams & Associates, and topographic surveys conducted on August 22 at low tide by [REDACTED] Van Bower Construction Services. to survey locations and elevations using an RTK GPS (all elevations are to geodetic datum: chart datum = geodetic datum + 3.1 m). The record drawings for the constructed habitats are shown in **Appendix A**.

The monitoring methods included qualitative methods, such as visual assessment supplemented by RTK GPS measurements for tidal channels, mudflat, beach grass meadow, and quantitative methods using transect and quadrat sampling for intertidal salt marsh and survival counts for backshore and riparian shrub and tree plantings. The quantitative methods are described in the Section 2.1, marsh vegetation, and Section 2.2, backshore and riparian vegetation. All observations were photo-documented.

### 2.1 Marsh Vegetation

The intertidal salt marsh vegetation surveys of the three constructed and Maplewood reference marshes were conducted by [REDACTED] on August 22, 2018. A series of transects, perpendicular to the HHWL were established and quadrats selected to provide representative data along the elevation gradient from high marsh (i.e. 1.5 - 2.0 m GD) to low marsh (i.e. 1.0 – 1.5 m GD). At each quadrat a Trimble SPS 985 Precision GPS rover using Cernet RTK corrections with an approximate accuracy of 0.02 m vertical and 0.01 m horizontal was used to provide accurate spatial location and elevation data. The constructed restoration habitats, showing transect and quadrat locations are presented in (**Figure 3**).

Marsh vegetation coverage was assessed using 1-m<sup>2</sup> quadrats in the constructed marsh benches and Maplewood reference marsh. At each survey and reference location, plant coverage within the 1-m<sup>2</sup> quadrat was estimated according to a modified Braun-Blanquet method consisting of five classes of cover: class 5 = 76-100 %; class 4 = 51-75 %, class 3 = 26-50 %, class 2 = 5-25 %, and class 1= <5 %. Species identification followed Hitchcock *et al.* (1984), using the updated taxonomy of (Kozloff 2005). Each quadrat and incidental observations were documented using a Nikon D7000 digital camera equipped with an 18-300 mm zoom lens. This protocol has been developed by GL Williams & Associates and used to assess numerous DFO-authorized marsh habitat projects. The data obtained effectively illustrate vegetation establishment and project compliance. The 2018 vegetation data for each site are shown in **Appendix B**.



## **2.2 Backshore and Riparian Tree and Shrub Planting**

Surviving shrubs and trees planted in each of the constructed backshore (i.e. island, west bank, east bank constructed habitats) and riparian (i.e. creek connection) habitats were assessed and species counted on August 23 and 24. Survival was based on observations of leaves and bark to determine if the individual plant was alive and viable. To provide an estimate of survival, survival counts were expressed as a percentage of the plants planted for each species. Notes were also made on factors affecting growth such as soil conditions, competition from other plants, especially in areas that were hydroseeded to control soil erosion, presence of flowers and/or berries, growth parameters (e.g. spreading of plants, evidence of new growth, obvious disease or plant health that may reduce growth and survival, etc.), and miscellaneous observations. The planting and % survival data for the tree and shrub plantings are provided in **Appendix C**.

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### **3.0 RESULTS**

Construction of the New Brighton Shoreline Habitat Restoration Project involved major excavation to convert the former industrial fill parkland (i.e. ground elevation of 4.0 – 5.0 m GD) to tidal channels and salt marsh (**Appendix A, Drawings 7086 and 7089**). The critical tidal elevations, in Geodetic Datum (GD), at the site range from Higher High Water of 1.97 m and 1.27 m elevations for Large Tides and Mean Tides, respectively, to Lower Low Water of -3.28 m and -1.99 m, for Large Tide and Mean Tide, respectively (**Appendix A, General Notes Drawing 34-348-EN-7081**). Mean Water Level is 0.08 m. The maximum depths for the tidal channels are -3.37 for the center or main channel, -2.68 m for the west channel and -3.07 m for the east channel (**Appendix A, Drawing 34-348-EN-7088**). The inlet elevations for the west channel is 0.30 m and -1.06 m for the east channel.

Salt marsh elevations ranged from approximately 1.0 m to 2.0 m, with high marsh plantings between 1.5 m and 2.0 m and low marsh between 1.0 m and 1.5 m. Surveyed elevations from the Maplewood reference salt marsh were used to guide salt marsh design. The excavated material was used to create elevated berms with the backshore adjacent the tidal channel and salt marsh. The east berm has a maximum elevation of 8.7 m, west berm 4.2 m, and island 4.9 m (**Appendix A, Drawing 34-348-EN-7088**).

#### **3.1 Tidal Channel Habitat**

Two inlet openings were constructed (**Appendix A, Drawing 34-348-EN-7090**) to provide adequate tidal flushing of water between the tidal channels and Burrard Inlet, and low water refugia for fish and birds below Lower Low Water during mean tides (**Photo 1**). The west channel is more exposed to Burrard Inlet and the opening was excavated to 0.3 m elevation; after construction there was some movement of gravel and sand into the inlet channel (**Photo 2**). The movement of the substrates has limited macroalgae colonization of the substrate in the west channel opening. The cobble sized armouring is thin (less than the design thickness) in some small areas (e.g. east bank) of the cut. The east channel inlet is located at a lower elevation (i.e. -1.06 m) and provides a longer tidal inundation with Burrard Inlet. The east channel also appears to have some small localized areas of thin armouring along the east bank (**Photo 3**). As these areas were constructed as per the design drawings and specifications, it is believed that this localized erosion has occurred since construction was completed. The western bank of the east inlet appears to be adequately armoured. Future annual monitoring will continue to include an assessment of the engineering stability at the outlets. Sea lettuce (e.g. *Ulva lactuca* and other macroalgae) are colonizing the lower channel cobble and boulders, and benthic algae and diatoms are present on the lower rock armouring the banks.

The excavated tidal channels appear to be functioning as intended. Approximately 1645 m<sup>2</sup> of tidal channel was constructed. Juvenile salmon were confirmed to be using the tidal channels (**Photo 4**) and small bank burrows created by green shore crab were also observed.



Photo 1. West tidal channel at low tide on June 25, 2018.

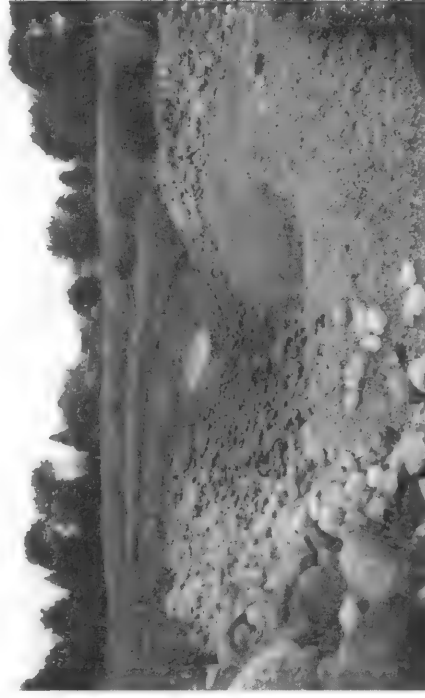


Photo 2. West channel inlet on August 24, 2018 showing substrate movement into channel.



Photo 3. East channel inlet at low tide on August 24, 2018.



Photo 4. Juvenile salmon (tentatively identified as coho) using tidal channels in May 2018 (Photo by [redacted], Hemmera).

The tidal channels are quite sheltered and are not exposed to strong tidal currents or vessel-generated waves that could cause significant bed scour or bank erosion. The higher inlet elevation for the west opening acts as a sill and offers some protection from higher energy waves that do occur in Burrard Inlet.

Over the year since construction was completed, there were some areas of localized erosion along the east bank of the east channel, along the south bank of the of the east berm, and along the southern bank of the island (**Photos 5-7**). These areas of the channel banks appeared to be steeper than the intended design (Williams and Tranmer 2017). In comparison, the reference site mudflat occurs over a broad tidal flat (**Photo 8**). Future annual monitoring will continue to include an assessment of the engineering stability within the excavated tidal channels.

### **3.2 Mudflat**

Mudflat habitat occurs between the lower limit of salt marsh (i.e. approximately 1.0 m elevation) and mean water (e.g. approximately 0.0 m elevation) and is characterized by native substrate that was exposed following excavation. Approximately 960 m<sup>2</sup> of mudflat habitat was created. The flatter portion (i.e. 3-7H:1V) of the mudflat exposed at mean water provides a 5-7 m wide bench that occurs along the island, west bank and east bank (**Figure 5**). Localized bank erosion occurs in the steeper slopes above the mudflats that exist on the island and east bank (**Photos 5 and 6**). Steep sections (1-2 H:1V) occur along the central channel north of the creek connection inlet (**Photo 7**) and along the island adjacent the east and west openings.

In contrast, the mudflat habitat that exists at the Maplewood salt marsh reference site forms a broad, gently sloping intertidal plain (**Photo 8**). It extends for about 300 m to mean water level. The substrate is composed of sand and mud and supports a surface film of diatoms and algae. Mudflats support a rich fauna of epibenthic (e.g. crustaceans) and infauna (e.g. bivalves and annelid and polychaete worms).

**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING REPORT**

**FINAL  
JANUARY 2019**



**Photo 5. Mudflat habitat between fenced marsh and low water.**



**Photo 6. Island mudflat between marsh and low water.**



**Photo 7. Steeply sloped mudflat at creek connection outlet.**



**Photo 8. Maplewood mudflat below reference salt marsh.**

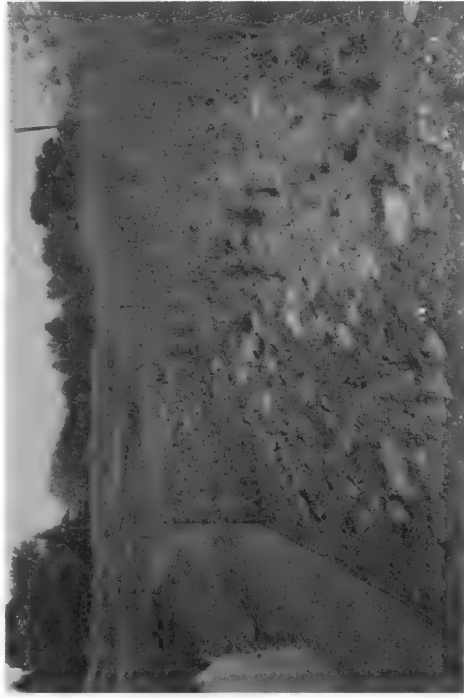
### 3.3 Salt Marsh

The salt marsh transplants are responding well following fencing that was installed soon after the initial planting in 2017 to restrict geese grazing. In May 2018, supplemental planting of nursery propagated saltgrass, *Distichlis spicata*, and arrowgrass, *Triglochin maritima*, was conducted to fill in high marsh areas that were not planted due to unavailable nursery stock in 2017. Initial plantings consisted of low marsh species from 1.0 to 1.5 m elevations and high marsh species from 1.5 to 2.0 m elevation. Transplanting of salt marsh vegetation included steep areas with coarse substrate (**Photo 9**) and wider areas consisting of muddy sand (**Photos 10 and 11**). Approximately 1890 m<sup>2</sup> of salt marsh was constructed. The Maplewood reference salt marsh consisted a broad, densely vegetated low and high marsh (**Photo 12**).

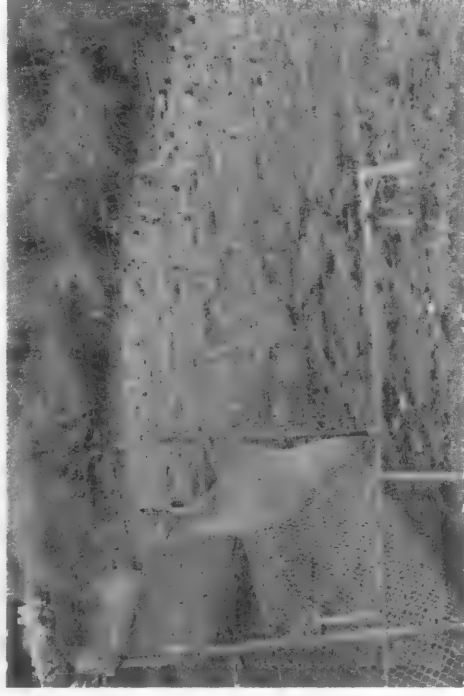
Transplanting coverage in August 2018 was thorough with plugs recorded in every quadrat (**Appendix B, Tables B-1 – B-3**). Vegetation coverage in the constructed salt marshes ranged from sparse to dense (**Figure 4**). Salt marsh vegetation establishment was highest in the island (i.e. 70% of the quadrats had above 5% coverage), and lowest in the east bench (i.e. 25% coverage over 5%). The Maplewood reference had dense coverage in all quadrats sampled (**Figure 4; Appendix B, Table B-4**).

The total number of species recorded in 2018 was similar in the constructed and reference marshes. The island salt marsh had the highest number species at 13, with 12 in the west bank, and 10 in the east bank (**Table 1**). The Maplewood reference marsh had 11 species. Pickleweed and saltgrass were the dominant species in the constructed marshes, with gumweed, seaside plantain, and arrowgrass being also being common. In the Maplewood reference salt marsh, orache, pickleweed and seacoast cordgrass, an invasive species, were the most frequently recorded species in the sampling.

The salt marsh survey data showed that, at the Maplewood reference site, sea milkwort colonized the lower limit of the salt marsh vegetation at elevation 1.16 m. However, in the protected salt marsh benches at the New Brighton Park Shoreline Habitat Restoration site, the lowest elevations of pickleweed occurred at 0.72 m in the east bank near the creek connection and 0.82 m at the west bank salt. These results suggest that the constructed salt marsh may extend lower than the design elevation of 1.0 and the actual area of salt marsh may end up being greater than designed.



**Photo 9. Steep section of island salt marsh bench.**



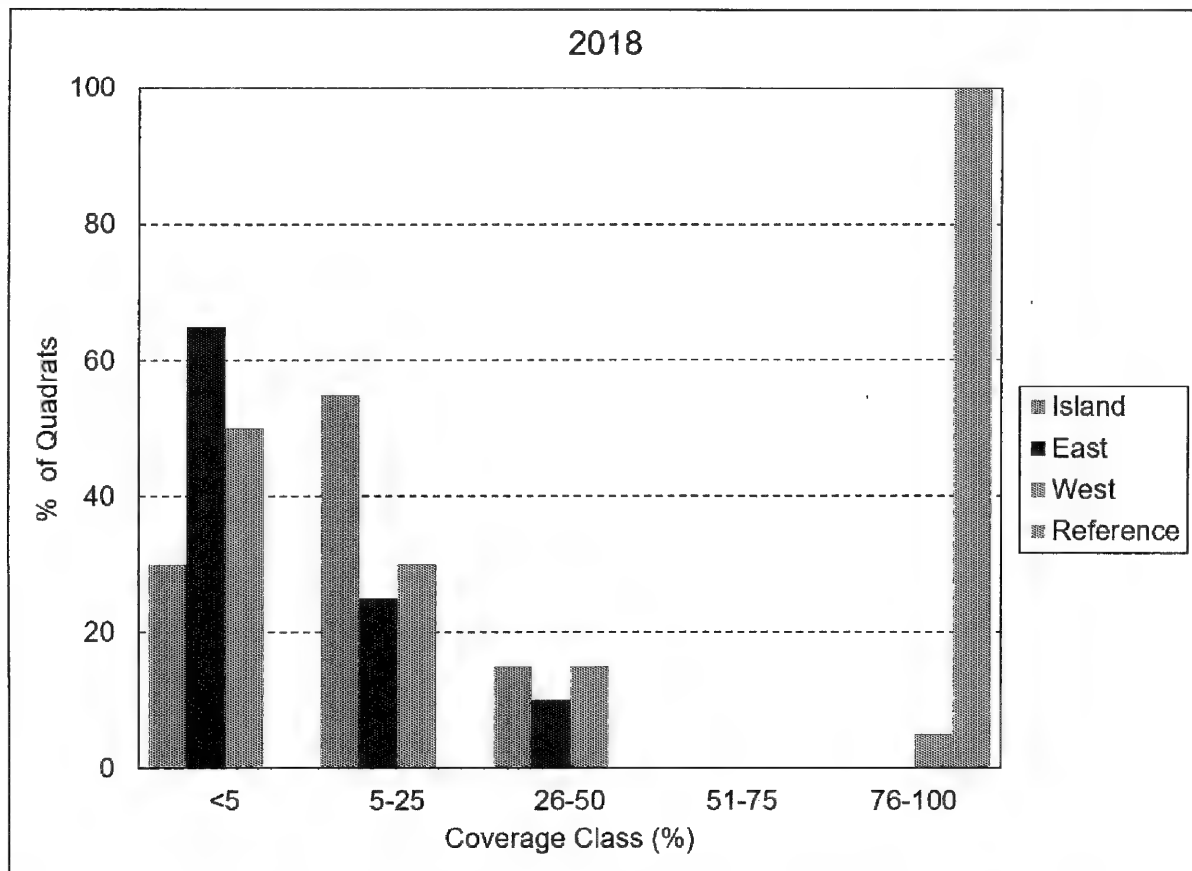
**Photo 10. East bank salt marsh transplants on August 22, 2018.**



**Photo 11. West bank salt marsh bench.**



**Photo 12. Maplewood reference salt marsh .**



**Figure 4** Salt marsh vegetation coverage at constructed and reference marshes on August 22, 2018.

Table 1 Frequency of occurrence (%) of marsh species recorded in island, east bank, west bank and reference marshes on August 22, 2018.

Species		% Frequency of Occurrence			
Scientific Name	Common Name	Island	East Bank	West Bank	Reference
<i>Achillea millefolium</i>	yarrow	5			
<i>Atriplex patula</i>	orache		5	25	75
<i>Bolboschoenus maritimus</i>	seacoast bulrush	5		10	
<i>Carex lyngbyei</i>	Lyngbye's sedge				5
<i>Distichlis spicata</i>	saltgrass	35	75	65	15
<i>Epilobium ciliatum</i>	purple-leaved willowherb		5		
<i>Grindelia integrifolia</i>	gumweed	30	25	20	30
<i>Hordeum jubatum</i>	foxtail barley			5	5
<i>Juncus arcticus</i>	Baltic rush	15	5	10	15
<i>Juncus gerardii</i>	mud rush				25
<i>Leymus mollis</i>	dunegrass	10			
<i>Lysimachia maritima</i>	sea milkwort				10
<i>Plantago lanceolata</i>	English plantain			5	
<i>Plantago maritima</i>	seaside plantain	15	30	30	
<i>Potentilla anserina</i>	Pacific silverweed	15	15		
<i>Sarcocornia pacifica</i>	pickleweed	65	65	85	45
<i>Schoenoplectus pungens</i>	three-square bulrush	10		5	
<i>Spartina patens</i>	Seacoast cordgrass				55
<i>Symphotrichum subspicatum</i>	Douglas' aster	5			25
<i>Trifolium</i> sp.	clover	5			
<i>Triglochin maritima</i>	arrowgrass	15	10	30	
	uniden. herb		5	5	
<b>Total Species</b>		<b>13</b>	<b>10</b>	<b>12</b>	<b>11</b>



### 3.4 Backshore Plantings

The area of backshore plantings included 1948 m<sup>2</sup> of beach grass meadow and 4505 m<sup>2</sup> of trees and shrubs that were also hydroseeded with a grass mixture. The New Brighton Park Shoreline Habitat Restoration Project benefited from irrigation over the summer and into mid-September 2017. Backshore, riparian and hydroseeded areas remained green despite the very hot and dry conditions. However, in 2018, the upland plantings did not fare as well during the hot and dry summer and at the time of the annual monitoring on August 23 and 24, the plants showed high mortality.

The very hot temperatures and lack of precipitation in the summer of 2018 resulted in very dry hydroseeded tall grasses and reduced survival in the planted areas (**Photo 13**). Dunegrass and backshore plantings had better survival than the shrub and tree plantings but were also challenged by the tall grasses that were hydroseeded throughout the west and east banks (**Photo 14**). The east berm conditions were especially dry and planted vegetation, both hydroseeded and planted shrubs and trees, experienced high mortality (**Photo 15**). On the lower slopes of the berm, where soil water concentrations were higher from surface runoff and below surface seepage, the plantings had higher survival (**Photo 16**).

The plant survival estimates for each of the planting types in the island, east bank, and west bank backshore areas are shown in **Table 2**. The island had the highest percentage of the three areas. The plantings benefited from protection and shade offered by the existing shoreline plantings and may have benefited from wetter microclimate created by the island setting surrounded by water. The tall grasses resulting from the hydroseeding created competition to the planted shrubs, particularly the low shrubs that had to compete directly for sunlight. The west bank tree plantings consisted of Pacific crabapple, deciduous and conifer trees planted in small patches. The extremely dry conditions combined with the competition from the tall grasses resulted in high mortality. On the east bank, the high relief further reduced soil moisture, which combined with competition with tall grass, led to very poor survival. On the lower slopes of the east berm, plant mortality was reduced. Soil moisture would be higher on the lower slope and resulted in better survival, despite the competition from the tall grasses.

**Table 2** Percentage (%) survival of tree and shrub backshore plantings surveyed on August 23 and 24, 2018.

Planting Type	Planted Subarea		
	Island	West Bank	East Bank
Trees	86	35	39
Tall Shrub	64	-	23
Low Shrub	54	-	19
Coastal Shrub	-	47	-
Beach Meadow	-	Full	-

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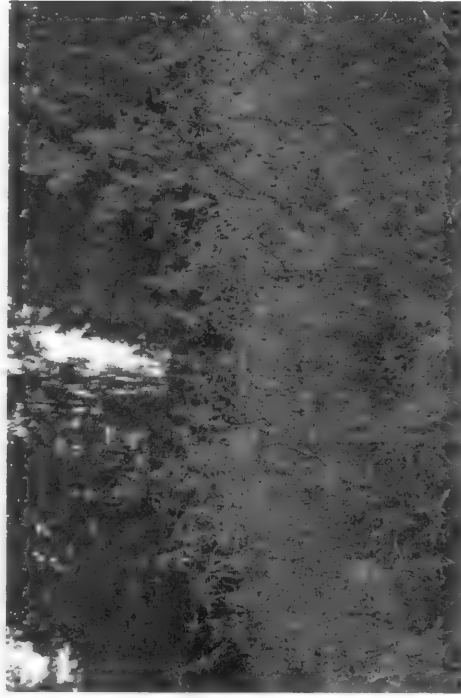
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**Photo 13. Island backshore plantings on August 23, 2018.**



**Photo 14. Dense dunegrass and seacoast meadow vegetation along west bank.**



**Photo 15. Dead willow shrubs amongst dense hydroseeded grasses.**



**Photo 16. Surviving shrubs on slope of east bank amongst tall hydroseeded grasses.**

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FIRST YEAR MONITORING REPORT**

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JANUARY 2019**

The monitoring data for backshore plantings indicate that some species such as Nootka rose, ocean spray, black twinberry, mock orange, and snowberry appear to be more suited to the site conditions, while more wetland species such as willow, salmonberry, thimbleberry, and red elderberry have done poorly. Some of the mortality has also been a result of competition with the tall grasses that were hydroseeded to control erosion of the newly placed soils. The dry conditions have also been very hard on the conifers, although Sitka spruce appears to be more suited to the island marine microclimate. Natural recruitment of cottonwood occurred on the island and at the creek connection and big-leaf maple at the creek connection.

Dunegrass has established well with prolific growth in all areas it was planted. It is also an attractive grass and fits well in the park setting. The beach meadow species have provided good cover, but competition from the tall grasses has reduced establishment. Goldenrod and Douglas's aster appear to be growing more prolifically than yarrow, beach pea and seaside lupine that tend to grow in a patchier distribution.

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### 3.5 Creek Connection

The creek connection, located south of the entrance roadway, provides a landscape feature connecting the greenway with the restored salt marsh in Burrard Inlet (**Appendix A, Drawings 34-348-En-7087 and 3-348-EN-7091**). The landscaping has included a 70 m long cobble-lined creek bed, with log and boulder in-channel habitat features (**Photo 17**), dense riparian and tall grasses along the west bank (**Photo 18**), and dunegrass and beach meadow herbs along the east bank (**Photo 19**). Natural recruitment of black cottonwood and big-leaf maple is occurring in the cobble-lined channel (**Photo 20**).

The creek channel and adjacent backshore and riparian plantings occur on City of Vancouver property. Estimated areas constructed include 390 m<sup>2</sup> of creek channel, 264 m<sup>2</sup> of beach grass meadow, and 206 m<sup>2</sup> of hydroseeded tall grasses and tree/shrub plantings.

Monitoring in August recorded high survival of planted trees and shrubs (**Table 3**), despite the dry conditions. Shade was provided by the mature trees along the west bank. Some species such as Nootka rose were spreading, and snowberry were establishing well but generally the low shrubs were forced to compete with the tall grasses that were hydroseeded along the west bank. Willow and red elderberry had lower survival most probably due to the extremely dry conditions through July and August.

**Table 3 Percentage (%) survival of tree and shrub riparian plantings surveyed on August 23, 2018.**

Planting Type	Creek Riparian
Trees	83
Tall Shrub	89
Low Shrub	77
Beach Meadow	Full

The creek connection design was constructed as a landscape feature requested by the project partner VBPR/City of Vancouver and was not intended to provide fish access. The creek connection will not support fish because flows are very low and the channel is dry most of the year, and there is a steep gradient to the restored greenway north of the railway tracks. Currently a steel culvert flume provides connection between the concrete headwall in the cobble-lined channel and the restored creek watercourse north of the railway tracks.

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FIRST YEAR MONITORING REPORT**

**FINAL  
JANUARY 2019**



**Photo 17. Cobble-lined creek channel joining restored Renfrew Creek upland greenway with restored Burrard Inlet salt marsh.**



**Photo 19. Planted dunegrass growing colonizing east bank of connection channel.**



**Photo 10. Dense riparian and hydroseeded grasses on east bank of connection channel.**



**Photo 20. Naturally recruited cottonwood and bigleaf maple.**

## **4.0 SUMMARY AND RECOMMENDATIONS**

The New Brighton Park Shoreline Habitat Restoration project has been very successful in restoring a former industrial fill site into functional tidal channel and salt marsh fish and wildlife habitat. The tidal channels are being used by juvenile chum and coho salmon, and likely numerous other fish species. Water birds, particularly great blue heron, ducks and Canada geese are frequent users of the new habitats.

The tidal channels have been designed for the ambient marine conditions and tidal flushing and water quality is maintained by the dual openings with Burrard Inlet. Some localized bank erosion is occurring on the steep banks in the central basin and is being monitored. However, generally the site experiences only low energy waves from Burrard Inlet. The salt marsh appears to be establishing well and the fencing is effective in minimizing Canada geese grazing. Pickleweed is growing well in the lower marsh and saltgrass is colonizing the high marsh. The species diversity is currently approximately 12 species, most of which are occurring in the high marsh. Pickleweed appears to be extending the lower range of the salt marsh, with growth occurring at 0.7 to 0.8 m, well below the lower range of 1.2 m recorded at Maplewood salt marsh. Fencing should be maintained at least for another growing season to promote further plant establishment and plant coverage.

Dunegrass and beach meadow herbaceous plants have established well, although the extremely dry summer and competition with tall grasses that were hydroseeded to control soil erosion are two factors affecting plant growth.

The backshore tree and shrub plantings have experienced high mortality in 2018. Mortality of the east and west banks plantings have been especially high, with the effects of extremely dry conditions being exacerbated by competition from the tall grasses that were hydroseeded to control soil erosion. Both these areas were constructed from fill excavated from the tidal channels and the increased elevations have encouraged reduced soil moisture during the summer.

Based on the results of the first year of monitoring, it is recommended that the following measures be considered to improve backshore plant establishment. The salt marsh, tidal channels and creek connection channel appear to be functioning as intended.

- An assessment of backshore and riparian areas is recommended in the spring (i.e. April) 2019 before the hydroseeded tall grasses grow and after the onset of leafing to confirm the tree and shrub survival following the wet winter conditions and determine the number and species for potential replanting in each of the three backshore areas;

- If necessary, tree and shrubs should be replanted in the fall (i.e. late September or early October 2019) to avoid the effects of drought conditions through next summer, allow the plants to absorb the stress of transplanting during fall/winter dormancy, and ensure that there is enough time for the nursery to produce quality material;
- The fall planting should be supervised to ensure that the plant stock is of high quality and that the planting schedule ensures that the planting is completed immediately upon delivery to the site and that potted plants are not left exposed to weather for than 24-48 hours;
- Tall hydroseeded grasses may need to be cut back in the spring to below the height of the low shrubs to allow them to receive more sunlight and reduce competition. The grasses do provide ground cover and reduce soil erosion but negatively impact shrub and tree growth. This could be accomplished by weed eating around the plants and using plant clippers or shearers to remove tall grass closer to the plants.
- Following the spring assessment, it may be prudent to modify the planting plan. Some species such as Nootka rose, ocean spray, black twinberry, mock orange, snowberry, etc., appear to grow better at the site, while more wetland species such as willow, salmonberry, thimbleberry, and red elderberry have been challenged by the dry conditions. The drier summer conditions occurring because of climate change may warrant reducing the areas of tree and shrub plantings or shifting to a drier biogeoclimatic community, particularly on the more poorly drained or more southern exposure on the island, east and west banks. Adjusting the planting plan may result in better establishment of more appropriate habitats to the ambient conditions.

## **5.0 LITERATURE CITED**

- Hitchcock, C.L., and A. Cronquist. 1984. Flora of the Pacific Northwest. Univ. Washington Press, Seattle: 730 p.
- Kozloff, E.N. 2005. Plants of Western Oregon, Washington, and British Columbia. Timber Press, Portland, OR: 512 p.
- Williams, G.L. and M. Tranmer. 2017. 2017 Inspection of New Brighton Park Shoreline Habitat Restoration Project, GL Williams & Associates Memo to C. Olson, Vancouver Fraser Port Authority, Vancouver: 10 p.

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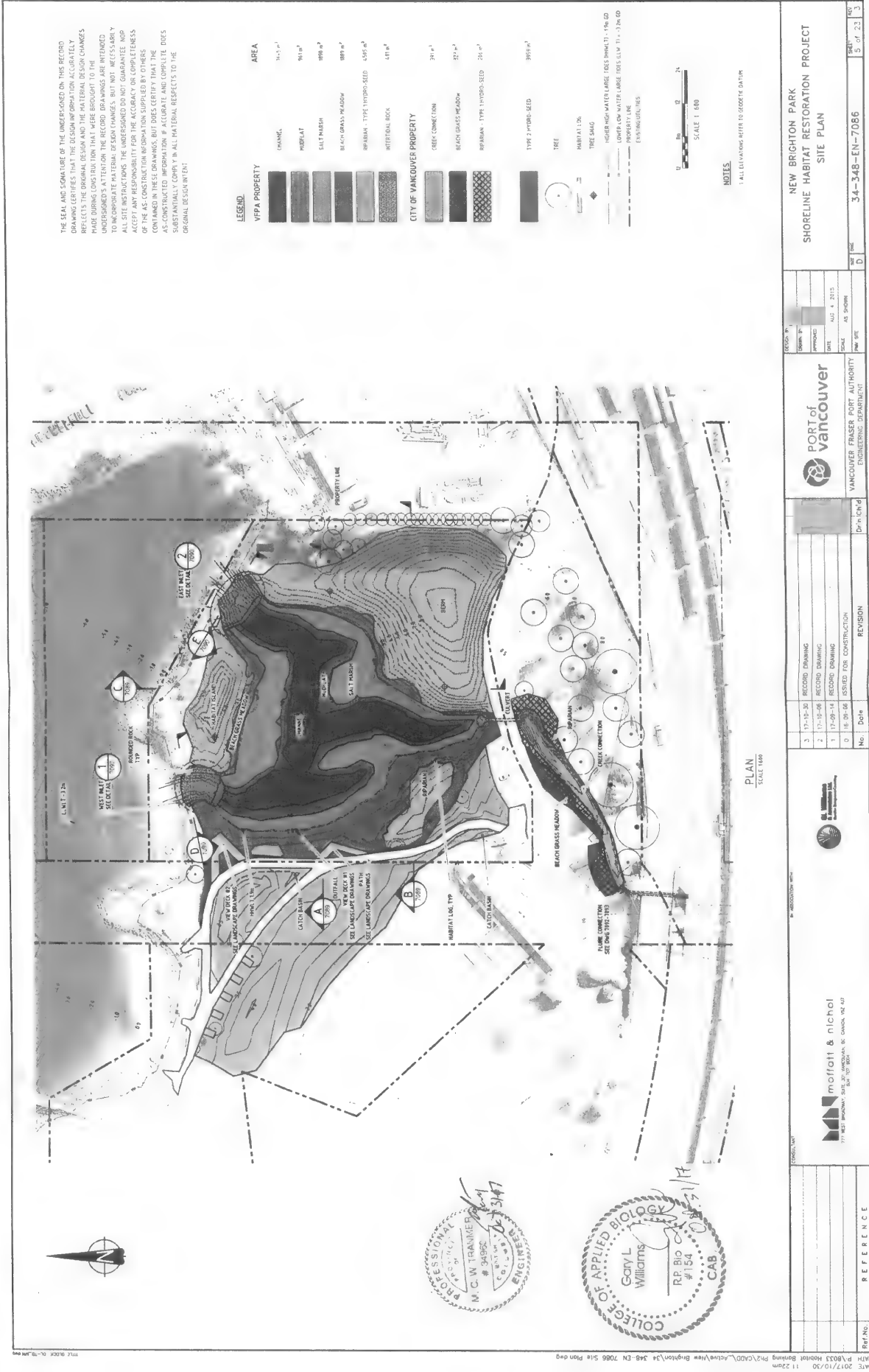


## **Appendix A – Habitat Record Drawings**

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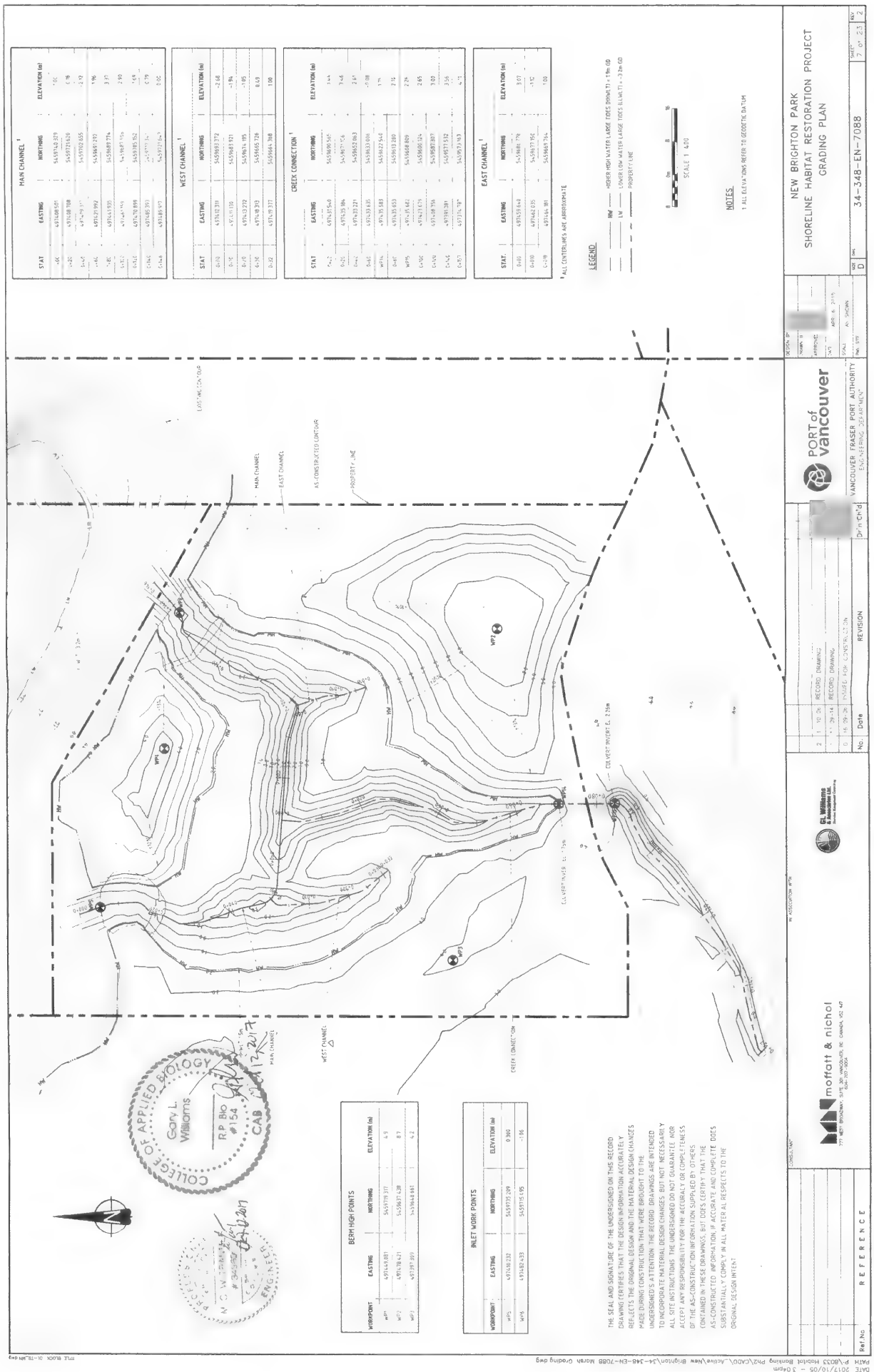




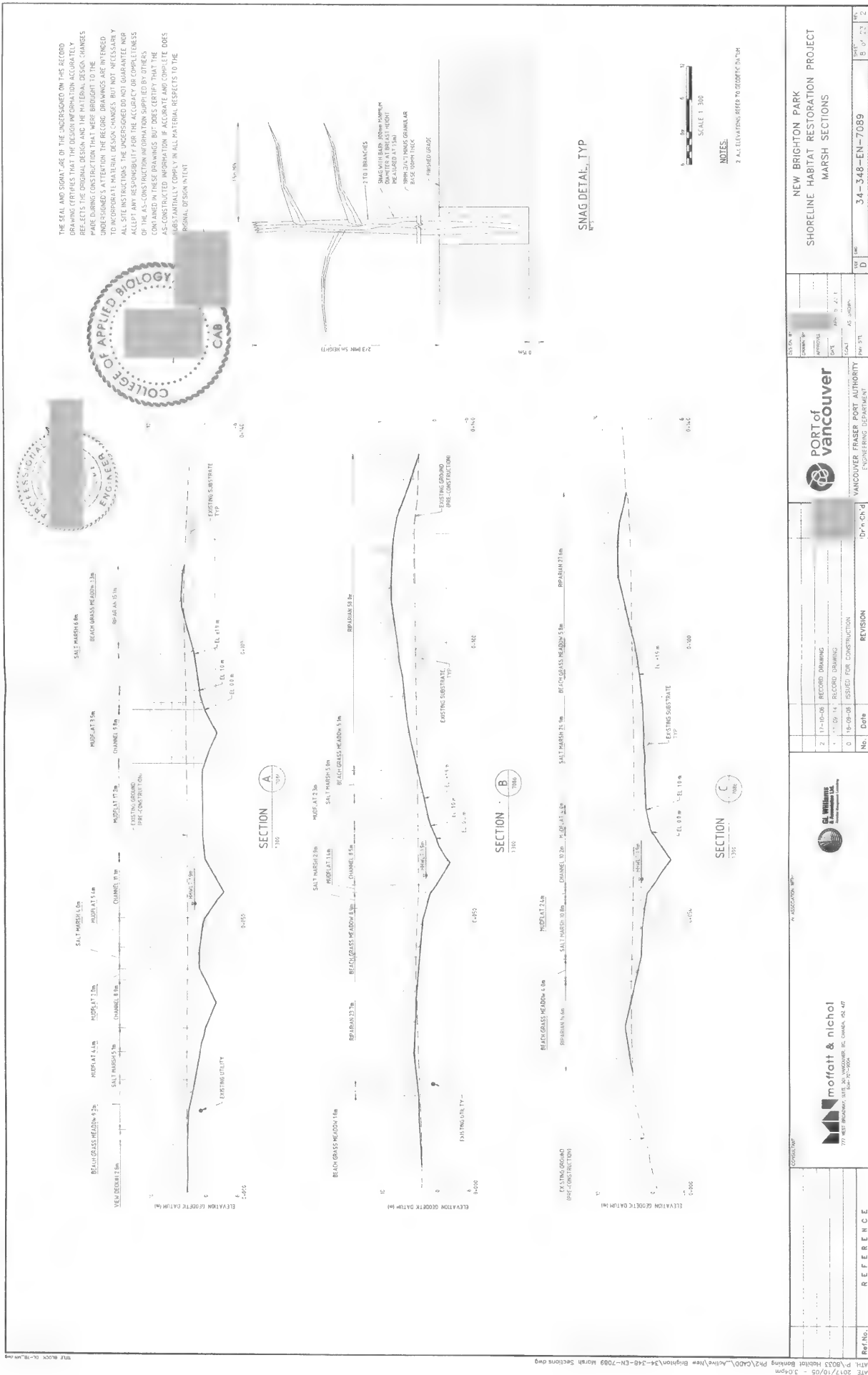


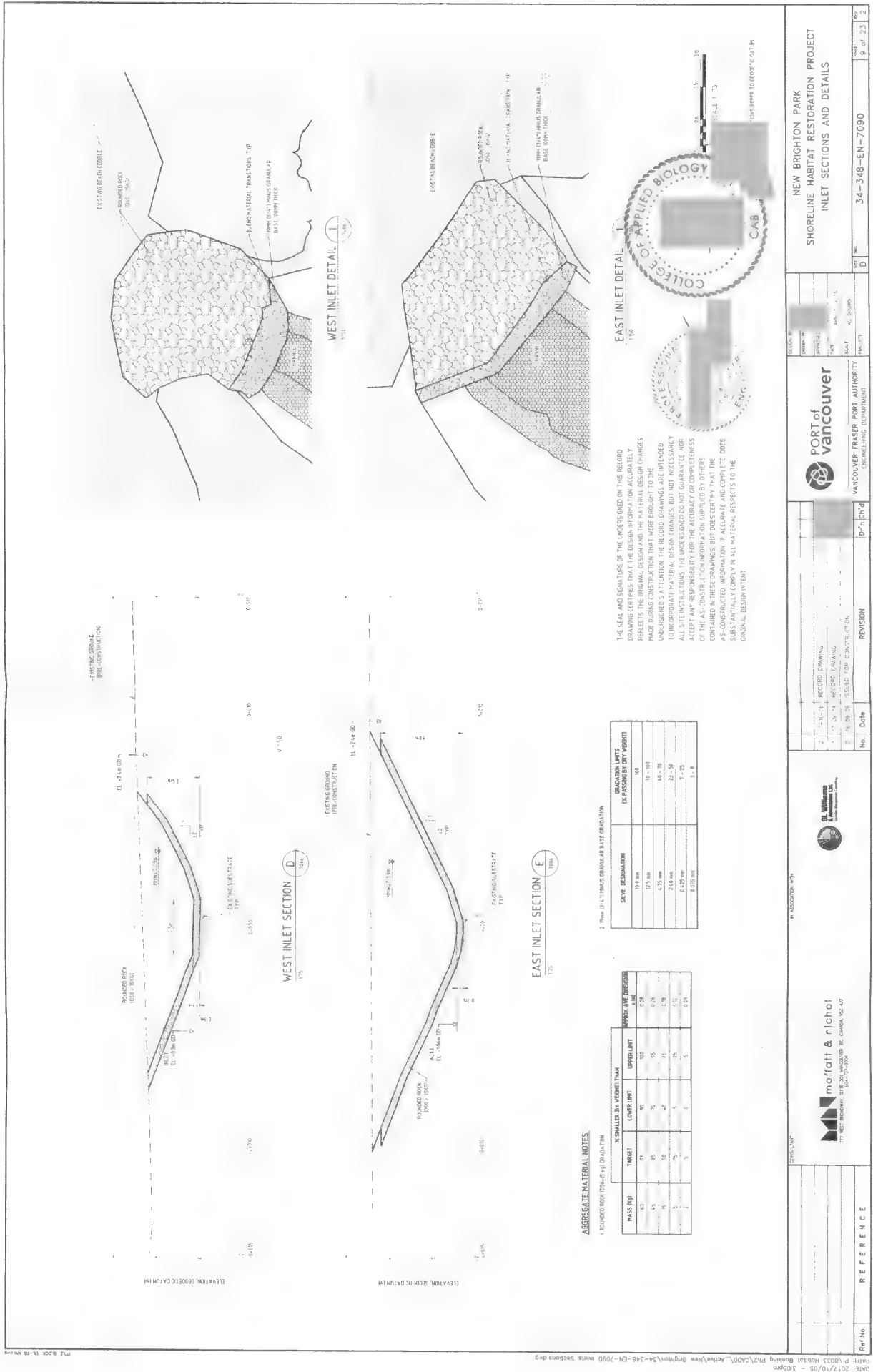
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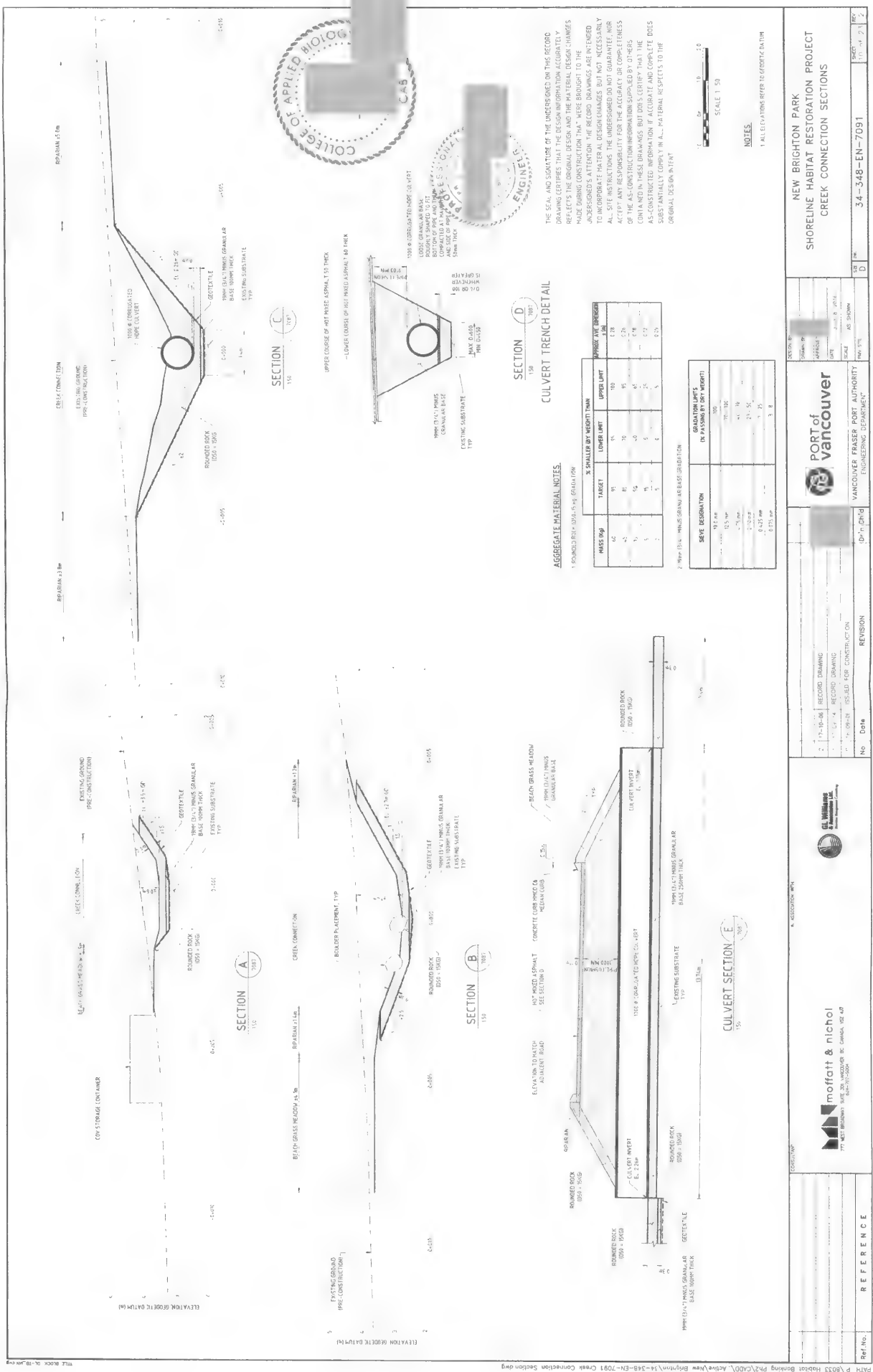


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## **Appendix B – 2018 Intertidal Salt Marsh Vegetation Data**

(Coverage data are presented as individual species coverage class/whole quadrat class, i.e. 1/5)

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**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT**  
**FIRST YEAR MONITORING REPORT**

**FINAL**  
**JANUARY 2019**

Table B-1. New Brighton Park island salt marsh vegetation quadrat coverage and species percentage frequency of occurrence on August 22, 2018.

Scientific Name	Common Name	Quadrat																				% Frequency of Occurrence
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<i>Achillea millefolium</i>	yarrow										1/2											5
<i>Bolbochoenus maritimus</i>	Seacoast bulrush												1/2									5
<i>Distichlis spicata</i>	saltgrass					1/1			1/1	1/2	1/1		1/2					1/1	1/2			35
<i>Grindelia integrifolia</i>	gumweed	2/2									1/2		2/2				2/2			1/2	1/2	30
<i>Juncus arcticus</i>	Baltic rush			2/3	1/1	1/1					1/2											15
<i>Leymus mollis</i>	dunegrass			1/3							1/2											10
<i>Plantago maritima</i>	seaside plantain	1/2		2/3				1/1														15
<i>Potentilla anserina</i>	Pacific silverweed	1/2					1/2									1/2						15
<i>Sarcocornia pacifica</i>	pickleweed			3/3	1/3	1/1	2/2	1/1	1/1	1/2	1/1			2/2	2/2			1/2	2/2	2/2		65
<i>Schoenoplectus pungens</i>	three-square bulrush	1/2						1/1														10
<i>Symphoricarum subspicatum</i>	Douglas' aster										1/2											5
<i>Trifolium</i> sp.	clover																			1/2		5
<i>Triglochin maritima</i>	arrowgrass										1/1			1/2	1/2							15

Table B-2. New Brighton Park east bank salt marsh vegetation quadrat coverage and species percentage frequency of occurrence on August 22, 2018.

Scientific Name	Common Name	Quadrat																				% Frequency of Occurrence
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<i>Atriplex patula</i>	Orache																					5
<i>Distichlis spicata</i>	Saltgrass	1/1	1/2	1/1	1/1	1/2	1/1	1/1	1/1	1/1	1/1	1/1	1/1					1/2	1/1	1/2		75
<i>Epilobium ciliatum</i>	purple-leaved willowherb												1/2									5
<i>Grindelia integrifolia</i>	Gumweed			1/1				1/1				2/2					2/3	2/2				25
<i>Juncus arcticus</i>	Baltic rush						1/1															5
<i>Plantago maritima</i>	seaside plantain	1/1		1/1	1/2			1/1				1/2				2/3						30
<i>Potentilla anserina</i>	Pacific silverweed				1/2											1/3	1/2					15
<i>Sarcocornia pacifica</i>	pickleweed	1/2	1/1	1/1	2/2	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/3	1/2	1/2	1/1	1/1		65
<i>Triglochin maritima</i>	arrowgrass	1/1													1/1							10
uniden. grass												1/2										5

Table B-3 New Brighton Park west bank salt marsh vegetation quadrat coverage and species percentage frequency of occurrence on August 22, 2018.

Scientific Name	Common Name	Quadrat																				% Frequency of Occurrence
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<i>Atriplex patula</i>	orache																					25
<i>Bolboschoenus maritimus</i>	seacoast bulrush							1/2		1/5	2/3	1/2	1/1	1/3		1/1						10
<i>Distichlis spicata</i>	saltgrass	1/2	1/1		1/1	1/2	1/1			1/3		1/2	1/1	1/3	1/2		1/1	1/1	1/1			65
<i>Grindelia integrifolia</i>	gumweed	1/2		1/1						1/5						1/1						20
<i>Hordeum jubatum</i>	foxtail barley	1/2																				5
<i>Juncus arcticus</i>	Baltic rush	1/2		1/1																		10
<i>Plantago lanceolata</i>	English plantain							2/5														5
<i>Plantago maritima</i>	seaside plantain							3/5	2/3				1/3		1/1		1/1					30
<i>Sarcocornia pacifica</i>	pickleweed	1/2	1/1		1/1	2/2	1/1	2/2	1/3	2/2	2/2	1/1	3/3	2/2	1/1	1/1	1/1	1/1	3/3	1/1		85
<i>Schoenoplectus pungens</i>	three-square bulrush	2/2																				5
<i>Triglochin maritima</i>	arrowgrass			1/1		1/1					1/2					1/1	1/1	1/1	1/3			30
	uniden. herb							2/5														5

Table B-4. Maplewood reference salt marsh vegetation quadrat coverage and species percentage frequency of occurrence on August 22, 2018.

Scientific Name	Common Name	Quadrat																				% Frequency of Occurrence
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<i>Atriplex patula</i>																						75
<i>Carex lyngbyei</i>	Lyngbye's sedge			2/5	2/5	3/5	2/5	2/5	1/5	1/5			1/5	1/5	3/5	4/5	3/5	3/5	2/5	3/5		5
<i>Distichlis spicata</i>	saltgrass						1/5												1/5			15
<i>Grindelia integrifolia</i>	gumweed	1/5				1/5							1/5		1/5	1/5						30
<i>Hordeum sp.</i>	Foxtail barley	2/5																	1/5			5
<i>Juncus arcticus</i>	Baltic rush																		2/5			15
<i>Juncus gerardii</i>	mud rush								4/5	5/5	5/5											25
<i>Lysimachia maritima</i>	sea milkwort	5/5										5/5										10
<i>Sarcocornia pacifica</i>	pickleweed	2/5	2/5				1/5						2/5	1/5				2/5	2/5	1/5	2/5	45
<i>Spartina patens</i>	seamallow cordgrass	4/5	4/5	4/5	4/5		5/5				3/5	2/5	2/5	3/5	5/5	3/5	4/5	4/5	5/5			55
<i>Symphoricarum subspicatum</i>	Douglas' aster																			1/5		25

## **Appendix C – 2018 Backshore Trees and Shrubs Data**

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**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING REPORT**

**FINAL  
JANUARY 2019**

Table C-1. Island tree and shrub species % survival on August 23, 2018.

Species	Planting Plan		Observed Plants	% Survival
	Size	Number Planted		
Trees				
Douglas Fir	#5 pot	5	4	80
Western Red Cedar	#3 pot	8	6	75
Sitka Spruce	#5 pot	11	10	91
Douglas Maple	#5 pot	5	5	100
Bigleaf Maple	#2 pot	13	11	85
Black Cottonwood	#3 pot	9	8	89
Subtotal		51	44	86
Tall Coastal Shrubs				
Vine Maple	#2 pot	12	12	100
Ocean Spray	"	48	26	54
Black Twinberry	"	48	34	71
Indian Plum	"	24	20	83
Mock Orange	"	24	18	75
Cascara	"	12	8	67
Sitka Willow	"	48	31	65
Red Elderberry	"	24	4	17
Subtotal		240	153	64
Low Shrubs				
Red-Flowering Currant	#2 pot	50	14	28
Nootka Rose	"	83	71	86
Salmonberry	"	50	6	12
Thimleberry	"	67	17	25
Snowberry	"	83	72	87
Subtotal		333	180	54

**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING REPORT**

**FINAL  
JANUARY 2019**

Table C-2. East bank tree and shrub species % survival on August 24, 2018.

Species	Planting Plan		Observed Plants	% Survival
	Size	Number Planted		
Trees				
Bigleaf Maple	#2 pot	41	13	32
Red Alder	#3 pot	7	2	29
Pacific crabapple	#5 pot	9	5	56
Sitka Spruce	#5 pot	15	3	20
Black Cottonwood	#3 pot	10	8	80
Douglas Fir	#5 pot	17	8	47
Western Red Cedar	#3 pot	20	8	40
Subtotal		119	47	39
Tall Coastal Shrubs				
	#2 pot			
Vine Maple	"	67	30	45
Ocean Spray	"	269	66	25
Black Twinberry	"	269	56	21
Indian Plum	"	134	40	30
Mock Orange	"	135	55	41
Cascara	"	67	6	9
Sitka Willow	"	269	55	20
Red Elderberry	"	134	3	2
Subtotal		1344	311	23
Low Shrubs				
Red-Flowering Currant	#2 pot	316	6	2
Nootka Rose	"	528	102	19
Salmonberry	"	316	30	9
Thimleberry	"	422	60	14
Snowberry	"	528	200	38
Subtotal		2110	398	19

**NEW BRIGHTON PARK SHORELINE HABITAT RESTORATION PROJECT  
FIRST YEAR MONITORING REPORT**

**FINAL  
JANUARY 2019**

Table C-3. West bank tree and shrub species % survival on August 24, 2018.

Species	Planting Plan		Observed Plants	% Survival
	Size	Number Planted		
Trees				
Pacific crabapple	#5 pot	10	6	60
Black Cottonwood	#3 pot	5	1	20
Sitka Spruce	#5 pot	4	1	25
Douglas Fir	#5 pot	4	0	0
Subtotal		23	8	35
Coastal Shrubs				
Ocean Spray	#2 pot	80	26	33
Black Twinberry	"	80	40	50
Red-Flowering Currant	"	60	12	20
Nootka Rose	"	101	64	63
Snowberry	"	80	45	56
subtotal		401	187	47

Table C-4. Creek connection riparian tree and shrub species % survival on August 23, 2018.

Species	Planting Plan		Observed Plants	% Survival
	Size	Number Planted		
Trees				
Pacific crabapple	#5 pot	6	5	83
Tall Riparian				
Red-Osier Dogwood	#2 pot	18	18	100
Black Twinberry	"	9	9	100
Indian Plum	"	9	7	78
Sitka Willow	"	4	2	50
Red Elderberry	"	4	3	75
Subtotal		44	39	89
Low Shrub				
Red-Flowering Currant	#2 pot	20	12	60
Nootka Rose	"	33	33	100
Salmonberry	"	20	20	100
Thimleberry	"	26	14	54
Snowberry	"	33	22	67
Subtotal		132	101	77



## **Appendix B**

### **Monitoring Status and Proposed Monitoring Schedule**

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Schedule of Post-Construction Monitoring Deliverables					
Site	Construction Completion	As-Built Report	Quantitative Assessment	Functionality Assessment	Annual Inspection
Gladstone Park Tidal Marsh	May 1993	Completed <sup>1</sup>	N/A <sup>1</sup>	N/A <sup>1</sup>	<b>Last Inspection: Summer 2018</b> Next Assessment: Summer 2019
Riverfront Park Tidal Marsh	May 1993	Completed <sup>1</sup>	N/A <sup>1</sup>	N/A <sup>1</sup>	<b>Last Inspection: Summer 2018</b> Next Assessment: Summer 2019
Timberland Habitat Basin	Late 1980s	Completed <sup>1</sup>	N/A <sup>1</sup>	N/A <sup>1</sup>	<b>Last Inspection: Summer 2018</b> Next Assessment: Summer 2019
Salt Marsh Restoration Site 3.1	October 2013	Completed	Completed: Summer 2014	<b>Completed: Summer 2018</b>	First Inspection: Summer 2019
Salt Marsh Restoration Site 3.2	January 2014	Completed	Completed: Summer 2014	<b>Fourth Assessment: Summer 2018</b> Next Assessment: Summer 2019	First Inspection: TBD
Salt Marsh Restoration Site 3.3	September 2013	Completed	Completed: Summer 2014	<b>Completed: Summer 2018</b> Next Assessment: Summer 2019	First Inspection: TBD
Salt Marsh Restoration Site 3.4	September 2013	Completed	Completed: Summer 2014	<b>Completed: Summer 2018</b>	First Inspection: Summer 2019

Schedule of Post-Construction Monitoring Deliverables					
Site	Construction Completion	As-Built Report	Quantitative Assessment	Functionality Assessment	Annual Inspection
<b>Salt Marsh Restoration Site 3.5</b>	September 2013	Completed	Completed: Summer 2014	<b>Completed: Summer 2018</b>	First Inspection: Summer 2019
<b>Glenrose Downstream Tidal Marsh</b>	July 2014	Completed	Completed: Summer 2015	<b>Completed: Summer 2018</b>	First Inspection: Summer 2019
<b>Glenrose Cannery Tidal Marsh</b>	July 2014	Completed	Completed: Summer 2015	<b>Third Assessment: Summer 2018</b> Next Assessment: Summer 2019	First Inspection: TBD
<b>Gunderson Mudflat Tidal Marsh</b>	July 2014	Completed	Completed: Summer 2015	<b>Third Assessment: Summer 2018</b> Next Assessment: Summer 2019	First Inspection: TBD
<b>New Brighton Park Shoreline Habitat Restoration</b>	Summer 2017	Completed: Fall 2017	<b>Completed: Summer 2018</b>	First Assessment: Summer 2019	First Inspection: TBD

<sup>1</sup>Timberland Habitat Basin, Gladstone Park Tidal Marsh and Riverfront Park Tidal Marsh were constructed in the late 1980s to early 1990s, prior to the formation of the Vancouver Fraser Port Authority Habitat Bank and hence they are not subject to the initial post-construction monitoring requirements as stipulated in Vancouver Fraser Port Authority's Post-Construction Monitoring Plan. Note that initial annual post-construction monitoring reports were submitted for the Gladstone and Riverfront Park Tidal Marsh sites and they received Fisheries and Ocean Canada's signoff as fully functional for marsh habitat banking credits. The as-built reports for these sites were not acquired. VFPA has conducted annual inspections to confirm they are viable for habitat banking as intended.

## **Appendix C**

### **Habitat Enhancement Program: Post-Construction Monitoring Plan**

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## **HABITAT ENHANCEMENT PROGRAM POST-CONSTRUCTION MONITORING PLAN**

Developed by Vancouver Fraser Port Authority

### **Contacts:**

Charlotte Olson, *P.Geo., PMP*  
Manager, Infrastructure Habitat Development  
Habitat Enhancement Program

Gord Ruffo, *P.Eng.*  
Senior Project Manager  
Habitat Enhancement Program



**Habitat Enhancement Program**

April 2018

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### Terminology Used

- **As-built Report:** A report produced upon completion of construction to confirm the dimensions, geometry and locations of all elements of the work completed for a site. The report includes record drawings prepared by a Professional Engineer and an inspection report prepared by a Qualified Environmental Professional to confirm that the site has been constructed to meet the biological objectives of the project.
- **Agreement:** Reference to the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank* between Vancouver Fraser Port Authority and Fisheries and Oceans Canada dated July 31, 2012 (signed September 10, 2012).
- **DFO:** Fisheries and Oceans Canada
- **Habitat Bank:** Vancouver Fraser Port Authority Habitat Bank
- **HHWLT:** Higher High Water Large Tide
- **LLWLT:** Lower Low Water Large Tide
- **PCMP:** Post-Construction Monitoring Plan
- **QEP:** Qualified Environmental Professional
- **VFPA:** Vancouver Fraser Port Authority, doing business as the Port of Vancouver

### Monitoring Terminology

- **Quantitative assessment:** An assessment that occurs the first year following site construction to assess baseline conditions, select transects and establish reference sites. This assessment will identify qualitative and quantitative biophysical characteristics associated with the site. The assessment will be conducted by a Qualified Environmental Professional and a Professional Engineer, as required.
- **Functionality assessments:** Assessments that occur following an initial quantitative assessment. Dependent on the site conditions, the type of monitoring may include an assessment of various quantitative and qualitative biophysical characteristics associated with the site. Functionality assessments will occur annually until the site is determined to be stable and functioning as intended. The assessments will be conducted by a Qualified Environmental Professional and a Professional Engineer, as required.
- **Annual inspections:** Inspections that are associated with sites in the Habitat Bank for general assurance that the habitat remains functional (per *Section 3.6* and *4.2* of the Agreement). These inspections will occur following completion of the functionality assessment period. In addition, annual inspections will be required for at least one year following withdrawal of a site from the Habitat Bank to confirm habitat viability (per *Section 3.4 c*) of the Agreement.
- **Confirmatory assessment:** An assessment that is associated with a site proposed to be withdrawn from the Habitat Bank (per *Section 3.4 d*) of the Agreement. The assessment will follow established protocols from the quantitative assessment or methods established by Fisheries and Oceans Canada as a condition of an Authorization.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### Preamble

This document was developed by Vancouver Fraser Port Authority (VFPA) to describe a Post Construction Monitoring Plan (PCMP) for the assessment of habitat created, restored or enhanced under VFPA's Habitat Enhancement Program. The PCMP summarizes how specific habitat types will be monitored in accordance with the *Working Agreement Concerning Procedures for the Development and Operation of the Port Metro Vancouver Habitat Bank*, 2012 (the Agreement) between VFPA and Fisheries and Oceans Canada (DFO). The PCMP is a working document provided to DFO for review and comment, with the understanding that the PCMP will continue to be developed with input from both parties.

The PCMP requirements have been developed to address the following sections as written in the current Agreement:

- **Section 3.1:** *Habitat creation or enhancement projects will undergo all appropriate reviews and assessments that may apply, including those mandated by applicable environmental assessment legislation and VFPA-mandated reviews and assessments. These reviews and assessments will include referral to the Burrard Inlet Environmental Action Program and Fraser River Estuary Management Program Coordinated Environmental Review processes<sup>1</sup>, with all appropriate supporting information and documentation.*
- **Section 3.2:** *Each habitat development Site will be subject to pre-construction, construction and post-construction monitoring as stipulated in the conditions for mitigating adverse environmental effects arising out of the reviews referenced in Section 3.1 above. The Parties may agree that additional monitoring may be warranted for some projects. A reason for such additional monitoring might be to establish and track the overall habitat value of the Habitat Bank, in the form of a balance sheet or other form agreed to by the Parties. Responsibility for, and implementation of, such additional monitoring will be determined as part of such agreement.*
- **Section 3.4 b):** *Habitat parcels targeted for withdrawal will be at least nominally fully functioning habitat, but their functionality will need to be confirmed through quantitative monitoring that identifies their existing biophysical characteristics to the satisfaction of DFO.*
- **Section 3.4 c):** *The selected parcels will subsequently be monitored for at least a year and possibly multiple years to confirm their viability, at the discretion of DFO.*
- **Section 3.4 d):** *The subsequent confirmatory monitoring may be done concurrently with the activity expected to result in the habitat loss.*
- **Section 3.4 e):** *Monitoring reports will be submitted as stipulated by DFO.*
- **Section 3.4 f):** *Habitat in the Habitat Bank will be confirmed as a successful or viable*

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<sup>1</sup> **Note:** The Burrard Inlet Environmental Action Program and Fraser River Estuary Management Program Coordinated Environmental Review Processes were dissolved in 2013. However, projects under the Habitat Enhancement Program still undergo reviews and assessments as required by applicable federal, provincial and municipal processes.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

*habitat credit if the physical works are stable and target vegetation or biological features have been established.*

- **Section 3.6:** *The VFPA will conduct annual inspections of the Habitat Bank for the duration of this Working Agreement after the prescribed monitoring period for each habitat creation project for general assurance that the habitat remains viable and secure. Where indications exist that this is not the case, the parties will mutually agree to a course of action that restores levels of habitat compensation appropriate to the habitat loss the creation project was applied to.*
- **Section 3.7:** *Any remedial action will be undertaken by VFPA to maintain the value of the habitat credits. This could include physical (e.g., shoreline protection or site stabilization) or biological (e.g., additional planting) works.*
- **Section 4.2:** *The VFPA will provide monitoring reports to DFO as stipulated in this Working Agreement. Once the stipulated monitoring provisions have been fulfilled, VFPA will maintain habitat surveillance for general assurance that the sites in the Habitat Bank remain functional, as stipulated in section 3.6 above.*

DFO requires any projects pursued under the Habitat Enhancement Program to comply with the Agreement and any pertinent DFO policy and/or guideline, (e.g., the 2013 Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting). The Fisheries Productivity Investment Policy provides guidance on undertaking effective measures to offset *serious harm to fish* that are part of or that support a commercial, recreational or Aboriginal fishery, consistent with the federal fisheries protection provisions of the *Fisheries Act*.



## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### Table of Contents

<b>Terminology Used .....</b>	<b>i</b>
<b>Preamble.....</b>	<b>ii</b>
<b>1.0 Introduction .....</b>	<b>1</b>
1.1 Habitat Types .....	2
<i>Marine Habitats .....</i>	<i>3</i>
<i>Estuarine Habitat.....</i>	<i>4</i>
<b>2.0 Post-Construction Monitoring Plan.....</b>	<b>5</b>
2.1 As-Built Report .....	7
2.2 Initial Post-Construction Monitoring Period .....	7
<i>Subtidal Habitats .....</i>	<i>9</i>
2.2.1 Eelgrass .....	9
2.2.2 Subtidal Reefs .....	10
<i>Tidal Habitats.....</i>	<i>11</i>
2.2.3 Tidal Channels .....	11
2.2.4 Tidal Flats.....	12
2.2.5 Gravel and Sand Beaches .....	12
2.2.6 Cobble/Boulder Beaches and Boulder (Riprap) Shorelines .....	12
2.2.7 Tidal Marshes .....	13
<i>Backshore and Riparian Habitats.....</i>	<i>14</i>
2.2.8 Grass/Herbs and Tree/Shrubs.....	14
2.2.9 Riparian Wetlands.....	15
2.3 Annual Inspections.....	15
2.4 Confirmatory Assessment.....	15
2.5 Additional Assessments.....	16
<b>3.0 Reporting .....</b>	<b>16</b>
<b>4.0 Conclusion .....</b>	<b>16</b>

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### 1.0 Introduction

The Vancouver Fraser Port Authority's (VFPA) Habitat Enhancement Program is an initiative focused on creating and enhancing fish and wildlife habitat. The program is a proactive measure intended to provide a balance between a healthy environment and future development projects. The program is being undertaken in accordance with the *Working Agreement Concerning Procedures for the Development and Operation of the Port Metro Vancouver Habitat Bank*, 2012 (the Agreement) between VFPA and Fisheries and Oceans Canada (DFO). The Agreement acknowledges mutual benefits of the habitat bank to both parties and provides guidelines for the operation of VFPA's Habitat Bank (the Habitat Bank). The Agreement also outlines monitoring requirements for the Habitat Bank.

Each habitat project proceeds through several key steps, from site selection and planning to construction and monitoring. These steps include, but are not limited to:

- Site selection;
- Design;
- Land tenure;
- Consultation (First Nations and Public);
- Permitting;
- Construction; and,
- Post-construction monitoring and inspection.

Sites included in the Habitat Bank will have undergone appropriate reviews and assessments including those mandated by applicable environmental assessment legislation and VFPA-mandated reviews and assessments. Each site is subject to the monitoring requirements stipulated in the authorizations, permits, approvals and other relevant documentation related to the project.

Some examples of documents outlining monitoring requirements for sites in the Habitat Bank could be *Fisheries Act* Authorizations and other DFO correspondence (e.g., a Letter of Advice or alternate), Project and Environmental Review Project Permits issued by VFPA, and environmental conditions as stipulated by a municipality or land owner (if applicable).

This document describes a Post-Construction Monitoring Plan (PCMP) for the assessment of habitat types that are in, have recently been withdrawn from, or are anticipated to be added to, the VFPA Habitat Bank (the "Habitat Bank"). The document provides recommendations for methods to be employed to monitor specific habitat types (see **Section 2.1**) in accordance with the Agreement.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### 1.1 Habitat Types

A variety of habitat types are currently in the Habitat Bank and VFPA is considering adding additional habitat types in the near future. A list of habitat types, organized by environment (i.e., marine and estuarine (which includes tidal brackish and freshwater habitats)) and the applicable section for habitat monitoring protocols within this PCMP, is outlined in **Table 1**. The habitat types are further grouped into "subtidal", "tidal" and "riparian" (or "backshore") habitats based on their location relative to the tidal zone bounded by the Lower Low Water Large Tide (LLWLT) and Higher High Water Large Tide (HHWLT) elevations. However, it is important to note that some habitat types (e.g., eelgrass) can occur across broader elevations ranges (e.g., intertidal and subtidal habitats).

**TABLE 1. Habitat Types in or Proposed for Inclusion in, the VFPA Habitat Bank**

Environment	Habitat Type	Currently in the Habitat Bank?	PCMP Section
Marine	<b>Subtidal</b>		
	Eelgrass	No	2.2.1
	Subtidal Reef	No	2.2.2
	<b>Tidal</b>		
	Tidal Channel	Yes	2.2.3
	Tidal Mudflat	Yes	2.2.4
	Gravel Beach	No	2.2.5
	Sand Beach	No	2.2.5
	Cobble/Boulder Beach	Yes	2.2.6
	Boulder (Riprap) Shoreline	No	2.2.6
	Salt Marsh	Yes	2.2.7
	<b>Backshore</b>		
	Grass/Herb	Yes	2.2.8
	Tree/Shrub	Yes	2.2.8
	Wetland	No	2.2.9
Estuarine	<b>Tidal</b>		
	Tidal Channel	No	2.2.3
	Tidal Mudflat	Yes	2.2.4
	Tidal Sandflat	No	2.2.4
	Marsh (Brackish and Freshwater Marsh)	Yes	2.2.7

Suggested definitions of the habitat types currently in the Habitat Bank, and those anticipated to be added to the Habitat Bank, are described in the subsections below. If other types of habitats are included in the Habitat Bank, appropriate monitoring methodologies will be developed in consultation with DFO.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### Marine Habitats

In the VFPA HEP Geographic Service Area, marine habitats are largely confined to Burrard Inlet and Roberts Bank and Boundary Bay where salinity is typically above 18 parts per thousand. The following types of marine habitats are included in, or are anticipated to be added to, the Habitat Bank:

#### Subtidal Habitats

- **Eelgrass:** Shallow estuarine or coastal habitat (located close to the LLWLT elevation) characterized by mud and/or sand substrates containing primarily native eelgrass (*Zostera marina*). The vegetation provides habitat for an assortment of fish and wildlife including juvenile salmon (*Oncorhynchus* spp.), herring (*Clupea pallasii*), and invertebrates such as crabs and snails. These in turn provide food for marine mammals, larger fish and sea birds. The habitat also provides abiotic ecosystem services including filtering water, trapping and binding sediments, baffling wave and current energy, removing contaminants, producing oxygen, sequestering carbon, accelerating nutrient regeneration, and regulating nutrient cycles.
- **Subtidal Reef:** Reefs that are typically composed of subtidal rocky substrate that provides attachment sites for kelp, other marine flora, and encrusting or colonial invertebrates. The reefs provide shelter and protection for many plant and animal communities and provide habitat for spawning, feeding and rearing.

#### Tidal Habitats

- **Tidal Channel:** A marine fish habitat that conveys water, nutrients, sediment and biota through intertidal habitats and can provide rearing areas for fish, wildlife and invertebrates.
- **Tidal Mudflat:** Unvegetated intertidal fish habitat, established in areas of predominantly saltwater influence, typically colonized by saltwater-tolerant benthic algal and infaunal invertebrate communities. Common invertebrates include mollusks (e.g., clams and oysters), crustaceans, and polychaetes, which provide food for predators such as fish and birds. Tidal saltwater mudflats typically occur in lower energy environments, where sand, silt, clay and organic matter accumulate.
- **Gravel Beach:** Gravel beaches can support critical life stages for coastal forage fish, especially surf smelt (*Hypomesus pretiosus*) and Pacific sand lance (*Ammodytes hexapterus*), that spawn near the high tide line. These species are important food sources for fish (including salmon), marine mammals and birds.
- **Sand Beach:** Similar to gravel beaches, sand beaches can support critical life stages for coastal forage fish such as surf smelt and Pacific sand lance that spawn near the high tide line. They can also provide habitat to support communities of infaunal invertebrates (e.g., clams).
- **Cobble/Boulder Beach:** Marine nearshore habitat consisting of cobbles and boulders that often support algal (e.g., rockweed) and invertebrate species (e.g., barnacles and mussels). These beaches provide valuable habitats for foraging fish, wildlife, and a diversity of invertebrates.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

- **Boulder (Riprap) Shoreline:** Natural boulder and anthropogenic rock that provides a rocky, stable habitat feature along marine shorelines. Angular boulders (i.e., riprap), often placed for erosion protection, can provide attachment sites below the HHWLT elevation for intertidal marine life including both motile and sessile organisms. Riprap in the marine intertidal zone can support similar flora and fauna as found in natural boulder and cobble beaches.
- **Salt Marsh:** Intertidal fish habitat typified by the presence of salt-tolerant emergent vegetation.

### **Backshore Habitats**

Backshore habitats are located above and within 30 metres of the HHWLT elevation in coastal areas influenced by saltwater. Some its key ecological services and functions include food production, temperature regulation, wave energy absorption, and habitat structure.

- **Grass/Herb:** Shoreline habitat above the HHWLT elevation consisting of graminoid/herbaceous plants that are tolerant to coastal sea spray (e.g., dune grass, *Leymus mollis*).
- **Tree/Shrub:** Native tree/shrub habitat located within 30 metres of the HHWLT elevation.
- **Wetland:** This habitat stores water and may support shrubs, and emergent and submergent vegetation such as common cattail (*Typha latifolia*).

### **Estuarine Habitats**

Estuarine habitat in the VFPA HEP Geographic Survey Area includes both brackish and freshwater tidally influenced habitats. Brackish habitats typically occur on the outer banks of the Fraser estuary, and lower reaches of the North, Middle, and South Arms of the Fraser River estuary where the water salinity ranges between 0.5 and 18 parts per thousand. Tidally influenced freshwater habitats occur upstream of the salt wedge (typically around Mitchell Island in the North Arm and Annacis Island in the South Arm). Salinities in tidal freshwater habitats are typically below 0.5 parts per thousand. The following estuarine habitat types are currently in the Habitat Bank:

### **Tidal Habitats**

- **Tidal Marsh:** Vegetated intertidal fish habitat characterized by the presence of emergent vegetation.
- **Tidal Channels:** Drainage channels that provide access for fish and aquatic organisms into shoreline habitats (i.e., tidal flats and marshes) during flood tides and export of organic matter and nutrients during ebbing tides.
- **Tidal Mudflat:** Unvegetated intertidal fish habitat, established in areas of predominantly freshwater influence, typically colonized by freshwater-tolerant benthic algal and infaunal invertebrate communities. Tidal freshwater mudflats typically occur in lower energy freshwater areas, where sand, silt, clay and organic matter accumulate, upstream of the influence of the salt wedge.
- **Tidal Sandflats:** Unvegetated intertidal areas consisting of sand substrate, usually located in the lower reaches of the distributary river arms fed by fluvial processes or outer banks fed by littoral drift.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### 2.0 Post-Construction Monitoring Plan

As outlined in the Agreement, sites included in the Habitat Bank are subject to post-construction monitoring to confirm that the habitat is viable and functioning as designed and intended. Although monitoring will be site-specific, typical assessed parameters include substrate, vegetation cover and/or establishment, physical stability, and achievement of the desired fisheries and other biological objectives (e.g., invertebrate, amphibian and/or bird usage). VFPA's goal is to provide consistent and coherent monitoring across all sites regardless of permitting requirements. If deficiencies are identified during monitoring of a site, VFPA and DFO will mutually agree to a course of action to remedy the situation.

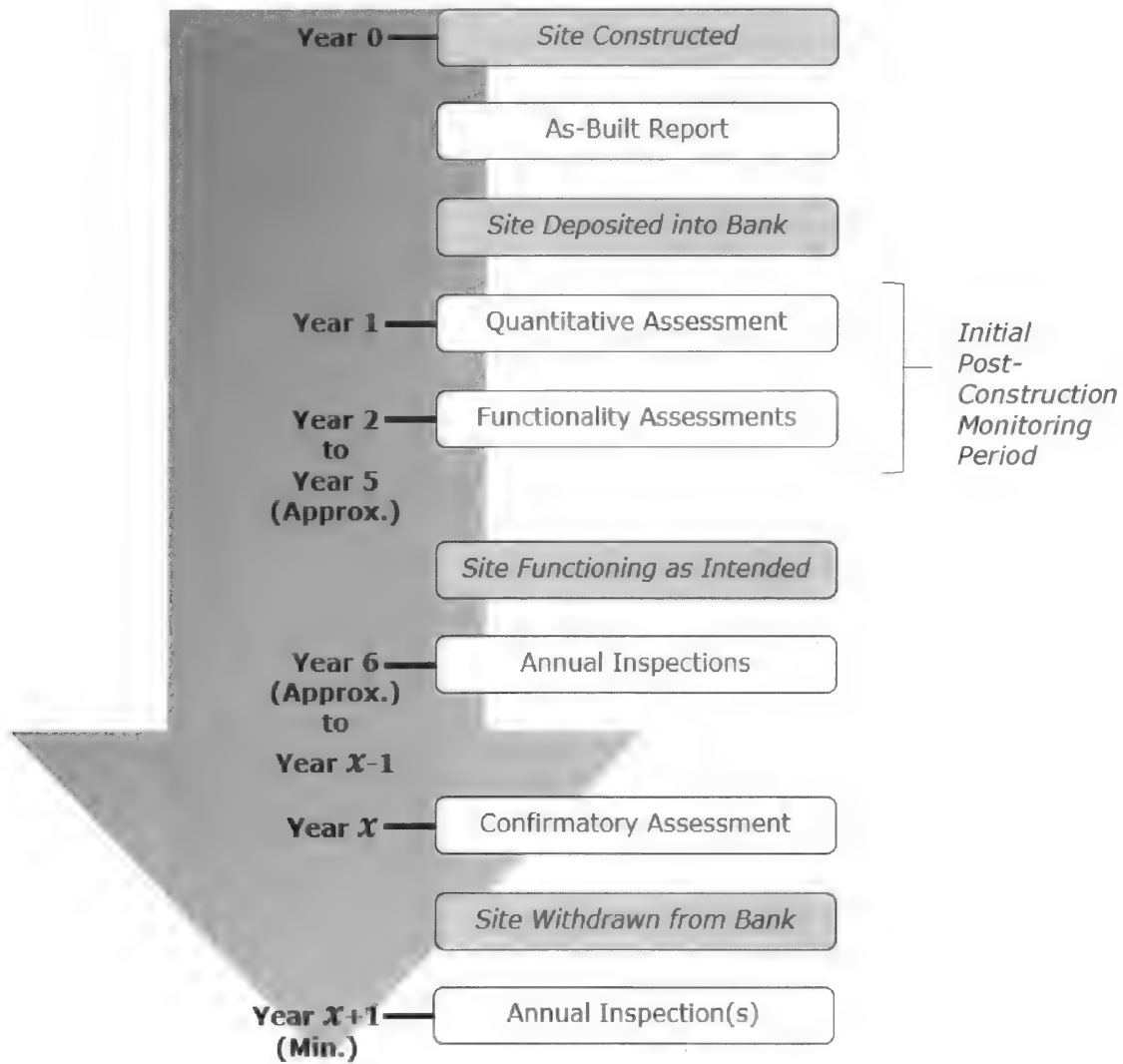
To distinguish between different levels of monitoring proposed for sites in the Habitat Bank, habitat-specific monitoring has been defined and is discussed in more detail below. It is understood that monitoring will be undertaken by a Qualified Environmental Professional (QEP) who is experienced in the ecology and assessment of the habitat type being assessed. A QEP is an applied scientist or technologist that is registered and in good standing in British Columbia and is qualified to conduct the assessment methodology.

In accordance with the Agreement, post-construction monitoring may include:

- **Quantitative assessment:** An assessment that occurs the first year following site construction to assess baseline conditions, select transects and establish reference sites. This assessment will identify qualitative and quantitative biophysical characteristics associated with the site. The assessment will be conducted by a QEP and a Professional Engineer, as required.
- **Functionality assessments:** Assessments that occur following a quantitative assessment. Dependent on the site conditions, the type of monitoring may include an assessment of various quantitative and qualitative biophysical characteristics associated with the site. Functionality assessments will occur annually until the site is determined to be stable and functioning as intended. The assessments will be conducted by a QEP and a Professional Engineer, as required.
- **Annual inspections:** Inspections that are associated with sites in the Habitat Bank for general assurance that the habitat remains functional (per *Section 3.6* and *4.2* of the Agreement). These inspections will occur following completion of the functionality assessment period. In addition, annual inspections will be required for at least one year following withdrawal of a site from the Habitat Bank to confirm habitat viability (per *Section 3.4 c*) of the Agreement.
- **Confirmatory assessment:** An assessment that is associated with a site proposed to be withdrawn from the Habitat Bank (per *Section 3.4 d*) of the Agreement. The assessment will follow established protocols from the quantitative assessment or methods established by DFO as a condition of an Authorization.

The quantitative assessment and functionality assessments form the initial post-construction monitoring requirements (**Section 2.1** below), while annual inspections and the confirmatory assessment would be undertaken following this initial post-construction monitoring period. The sequence of these monitoring events has been outlined in **Figure 1** below.

VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan



**Figure 1.** Proposed sequence of monitoring events for sites in the VFPA Habitat Bank.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### 2.1 As-Built Report

To confirm that a site proposed for inclusion in the Habitat Bank has been constructed to meet the physical parameters and biological objectives of the project, an as-built report, including the results of an inspection by a Professional Engineer and QEP, will be undertaken. The report will include surveys to confirm the project area, critical tidal elevations, property lot lines, etc., and that the site has been constructed per the requirements of applicable permits and authorizations for the project. The report will include, but is not limited to:

- Delineation of newly created habitat, where applicable (completed as part of as-built surveys for constructed habitats);
- Photographic documentation of the habitat; and
- An assessment of physical site stability and health of the installed plant stock, where applicable.

As-built reports will be included in the annual report submitted to DFO to provide information on the habitat transactions per *Section 4.1* of the Agreement. Following the production of the as-built report, the habitat will be deposited into the Habitat Bank and will be subject to post-construction monitoring. VFPA recognizes that in accordance with *Section 3.3* of the Agreement, the value or credit of a habitat parcel will need to be determined immediately prior to its withdrawal from the Habitat Bank and as such, the value is subject to change depending on specific site conditions or DFO's policy criteria.

### 2.2 Initial Post-Construction Monitoring Period

The first few years following habitat creation are critical for successful habitat establishment and for meeting desired objectives, and therefore this initial monitoring involves more detailed levels of assessment. The initial post-construction monitoring event has been developed assuming, in general, a five-year monitoring period. The actual monitoring period may be longer or shorter than five years. In some cases, functionality assessments in Year 4 or 5 may not be required given successful results demonstrated during earlier monitoring events and the Agreement's requirement for a confirmatory assessment prior to the withdrawal of credits from the Habitat Bank. However, the initial post-construction monitoring period may also be longer than five years if the site is not achieving its biophysical objectives within the first five years.

The initial post-construction monitoring period includes quantitative sampling surveys that occur in Year 1 following construction and annual functionality assessments starting in Year 2 and continuing until the habitat is deemed to be stable and functioning as designed and intended, usually when equivalency is reached between the constructed and reference sites. The field surveys will generally occur during the peak growing season for habitat types where the establishment of vegetation is a primary objective (e.g., eelgrass, marsh, grass/herb, and tree/shrub habitats), as it enables a better assessment of the productive capacity of the site. Sites that are established in the late winter/early spring of a given year will generally be monitored for the first time during the next peak growing season, typically the late summer or early fall.



## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

The primary objectives of the initial quantitative assessment are to:

- Track the initial establishment of a habitat site;
- Establish a nearby (i.e., small reach) reference site(s) with similar target attributes (e.g. habitat type, vegetation community, same fish stock, etc.);
- Establish a baseline method that will be used during the confirmatory assessment, prior to withdrawal of a site from the Habitat Bank; and,
- Identify any remedial actions that may be required to ensure the productive potential of a habitat site is achieved.

Functionality assessments may be reduced in scope in comparison to the initial quantitative assessment, but often will include elements of the described quantitative methods depending on site-specific conditions and objectives. The primary objectives of functionality assessments are to:

- Track the establishment of a habitat site until the site is determined to be functioning as designed and intended, using a combination of qualitative and quantitative methods as established during the initial quantitative assessment; and,
- Identify any remedial actions that may be required to ensure the productive potential of a habitat site is achieved.

Although assessments will be site-specific, a typical assessment will include an evaluation of vegetation establishment, physical stability, and achievement of fisheries and other desired biological objectives (e.g., invertebrate, amphibian and/or bird usage). For each habitat type, the annual assessment methods will, at minimum, involve:

- Visual documentation via a photographic record, with consistent photo stations to be used as much as possible from year to year at representative locations at the habitat site. The photos should include different angles and provide visual representation of site health and habitat values;
- Observations of fish, wildlife and/or invertebrate use of the habitat types;
- Observations of potential site stability issues (e.g., erosion or accretion of sediments); and other issues such as debris (e.g., log) accumulation, invasive plant colonization, grazing pressures, etc.; and
- Recommendations for maintenance and/or remedial measures (e.g., physical works such as installing shoreline protection, or biological works such as additional planting, species substitution, invasive plant removal, etc.), if required.

Habitat-specific methods to be employed during the initial post-construction monitoring period for each habitat type in, or proposed for future deposit into, the Habitat Bank, are described in the subsections below.

## Subtidal Habitats

Subtidal habitat types are those that are constructed below the lowest normal tide level (below the LLWLT elevation), and are ecologically important because of the breeding, feeding and rearing values that they offer to fish and wildlife. Assessments of subtidal habitats will involve the use of underwater assessment methods (e.g., SCUBA transect surveys) and/or cameras and underwater drones that can be used to assess the habitat, substrates and macrofaunal species present. Transects and quadrats will be photographed and videotaped for further analysis and as a record of the assessment. While the assessments should occur during the summer when productivity is highest, visibility can be reduced during summer months and assessments will need to be scheduled based on tidal height, currents, lighting conditions and plankton levels. Note that the following are recommendations for assessment protocols, and habitat-specific monitoring may need to be adapted based on the depth range, shape, sediment type, and area of the created habitat.

### 2.2.1 Eelgrass

The main objectives of the monitoring program will be to determine whether the eelgrass plants survive and multiply to a density comparable to a natural bed, and to determine if the eelgrass covers the intended area. Transplanted eelgrass beds are typically monitored using random surveying rather than transects, as transects take considerable time to set up in the subtidal zone and may damage or uproot some of the transplanted eelgrass. Random surveying will also help to incorporate edges of the habitat site. Assessment methods (adapted from Precision Identification) will include an analysis of eelgrass survival, including growth, and plant vigour which will include:

- Identification and assessment of nearby reference sites with similar target attributes including shoot density, leaf area index, and bed area. The reference site will be used in subsequent quantitative monitoring events;
- An evaluation of the maximum and minimum depths of the submerged eelgrass bed, using a weight attached to a measuring device lowered to a diver at the deepest and shallowest edges of the bed;
- Assessment of the edge effects. Divers will swim the perimeter of the transplant area and monitor the distance from the edge of the transplanted area to the nearest transplanted eelgrass at fixed locations;
- Measuring and georeferencing any areas greater than 25 m<sup>2</sup> within the transplanted area that are devoid of eelgrass;
- Assessment of the eelgrass bed density and leaf area index:
  - Transplanted eelgrass beds will be divided into sections based on site-specific depth range, shape, bed area, and physical variation.
  - Random survey points will be generated for each section. There will be one survey point per 500 m<sup>2</sup>, or a minimum of two survey points per section, whichever is greatest. If necessary, more survey points will be generated to sufficiently survey the edges of the eelgrass bed.
  - Eelgrass survival and colonization will be evaluated based on shoot density and leaf area index (mean shoot length x mean shoot width x mean shoot density). Twenty quadrats will be surveyed at each survey point. As it will likely take a couple of years for spaces between eelgrass patches to fill in, a 1 m x 1 m

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

quadrat can be used the first two years of sampling (or until the eelgrass patches coalesce), while in the following years a smaller 0.5 m x 0.5 m quadrat can be used.

- Shoots within each quadrat will be enumerated to determine density. Leaf area index will be determined by measuring leaf length from the sediment surface to the tip of the second oldest leaf, and the width measured near the middle of the leaf. In order to avoid surveying only the largest shoots, the shoot located nearest to the upper right corner and the lower left corner of the quadrat will be measured.
- The number of flowering shoots within each quadrat will be enumerated; and
- Bathymetric surveying should be undertaken at the beginning and end of the initial monitoring period (e.g., Years 1 and 5) to determine whether transplanted areas are physically stable over time and the substrate depths are per design elevations.

### 2.2.2 Subtidal Reefs

The main objectives of the monitoring program will be to document the reef community focusing on colonization by vegetation and invertebrates. Observations of motile fish, invertebrate and other wildlife use of the habitat will be documented. Assessment methods used in the analysis of reef habitats include:

- Identification of onsite factors that could impact or limit the establishment and/or persistence of macroalgae and encrusting invertebrates;
- Documentation of the areal extent of algae and encrusting invertebrate communities on a base map (e.g., a hydrographic map) with a scale no greater than 1:1,000.;
- Establishment of transects in each artificial reef, oriented perpendicular to shore and placed a minimum of 25 m apart (depending on reef size). A 1 m x 1 m quadrat should be spaced at 5 m intervals along the transect, with habitat observations recorded for each quadrat. Habitat variables to be recorded will include, as a minimum:
  - Substrate type (i.e., bedrock; boulder (>256 mm diameter); cobble (634-256 mm); gravel (2-64 mm); sand (0.0625-2 mm); or, silt/mud/clay (<0.0625 mm)) and relative composition (i.e., as a percentage);
  - Macroalgae species and areal coverage by class (i.e., >0-5%; >5-25%; >25-50%; >50-75%; and >75-100%);
  - Encrusting (sessile) invertebrate species (e.g., barnacles and mussels) and areal coverage by class (as noted above for macroalgae); and
  - Motile animal species (e.g., fish, crabs, snails) and abundance (which may be estimated, if relatively large numbers are present). See below for protocols on fish usage surveys; and
- Fish usage surveys for reef projects will include visual observations using a roaming/roving SCUBA diver technique, or a towed video technique (and/or underwater drones) for a specified time period. Abundance of fish by species will be estimated and assigned one of four abundance categories: single (1 fish); few (2 to 10 fish); many (11 to 100 fish); and, abundant (>100 fish). When possible, the actual number of fish will be recorded and an "encounter rate" (i.e., fish per dive hour) will be calculated. Because marine vessel (boat) activity can have a confounding effect on fish presence, qualitative observations of boat traffic before, during, and after the fish survey will also be recorded.

## Tidal Habitats

Tidal habitats can generally be assessed during suitable low daytime tides when the habitat types are not submerged (i.e., dependent on the constructed elevation of the habitat type as outlined in the as-built drawings). For example, in the Lower Mainland, the low low-tides in the summer tend to occur during the daytime, while in the winter the low low-tides tend to occur at nighttime. Assessment methods have been adapted from DFO's Marine Foreshore Environmental Assessment Procedures (Northrup and Cowan 2002).

### 2.2.3 Tidal Channels

The main objectives of the monitoring program will be to assess site stability, with a focus on potential accretion and/or scouring of sediments in the channel from currents and waves, and to document water quality (e.g., evaluation of hydraulic flushing of pooled areas). If there are concerns regarding tidal flushing and/or erosion/accretion of sediments in the channel, an engineering assessment of the stability and potential elevation surveying of the tidal channel should be undertaken. Assessment methods used in the analysis of tidal channels may include:

- Characterization of the general substrate and potential vegetation community establishment within the channel, including relative location and visually estimated areal coverage by species type;
- Water quality sampling: Pooled water in the tidal channel should be tested for basic water quality parameters including dissolved oxygen (mg/L and % saturation), temperature, salinity and pH, with values compared against recommended criteria for aquatic (marine) life as presented by the Canadian Council of Ministers of the Environment. The probe should measure water quality at the bottom and surface of the channel, and at set depth increments (e.g., 0.5 m) between these depths. It is important to assess dissolved oxygen levels in the channel (a factor dependent on temperature and salinity), as low dissolved oxygen levels can negatively impact marine life (e.g., rearing juvenile salmonids). In the marine environment, oxygen levels tend to be highest in surface waters, while in deeper waters (especially where light is scarce) oxygen tends to be lower as it is consumed by bacteria during decomposition of organic matter. The areas with greatest dissolved oxygen depletion are those with restricted circulation and an abundant supply of organic matter. The recommended minimum concentration of dissolved oxygen in marine and estuarine waters is 8.0 mg/L. The pH of marine and estuarine waters should fall within the range of 7.0 to 8.7 unless it can be demonstrated that such a pH is a result of natural processes; and
- If documenting fish use of the tidal channel is desirable, fish sampling may be undertaken. However, unnecessary disturbance to the habitat should be avoided. Fish sampling may include deployment of a seine and/or minnow traps (in areas where dewatering will not occur during low tide), with the approximate seine area and/or soak time to be recorded. However, the density and diversity of fish will depend on site-specific conditions at the time of sampling (including time of year, time of day, tidal fluctuations, etc.). A less intrusive form of fish sampling could include deployment of a submerged camera/drone. However, identifying fish utilizing this method may be challenging due to water clarity.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### 2.2.4 Tidal Flats

The main objectives of the monitoring program for tidal flats will be to document physical site stability with a focus on scouring/erosion of fine sediments. Observations will include qualitative characterization of substrates, invertebrate composition, vegetation, and biofilm establishment (where applicable), including relative location and visually estimated areal coverage by species type. Observations of use of the habitat by other wildlife (e.g., shorebirds) and anthropogenic features (e.g., stranded logs and woody debris) should also be noted.

Due to the extensive sampling required, and to avoid disturbance to the flats, quantitative sampling to assess colonization by infaunal communities is not recommended. However, if there is concern over whether the mudflat or sandflat is providing the intended biological value, more detailed assessment methods may include:

- Establishment of sample plots (e.g., 0.25 m x 0.25 m quadrats). The number of plots to be established will be based on an evaluation of statistical significance relating to the size of the created or restored site, with plot locations randomly assigned. Plots will be geo-referenced for subsequent follow-up in the field;
- Digging in sample plots can be undertaken to a depth of approximately 20 cm to look for evidence of macroinvertebrates (e.g., mollusks). Any invertebrates discovered should be identified and enumerated; and
- If desired, mud cores can be taken to assess soil composition and species presence and diversity within the mud.

### 2.2.5 Gravel and Sand Beaches

The main objectives of the monitoring program will be to assess sediment size, slope, debris (e.g., log) accumulation and potential off-site migration of sediment and/or accretion of sediments at the site. Any observations of fish, wildlife (e.g., shorebird), and invertebrate use of the beach should be noted (e.g., crabs). At sites where there is likely to be a higher density of macroinvertebrates (e.g., in fine sands), sample plots may be established using a similar protocol for tidal flats (see **Section 2.2.4**).

### 2.2.6 Cobble/Boulder Beaches and Boulder (Riprap) Shorelines

The main objectives of the monitoring program will be to document colonization of the cobble and boulder substrates by algal and invertebrate communities. A combination of transects and quadrats should be utilized in the assessment of cobble/boulder beaches and shorelines. Transects should be established perpendicular to the shoreline at regular intervals (e.g., every 25 m) throughout the site and should begin at the HHWLT elevation and extend to the lowest depth for the habitat type at the site. This assessment protocol should follow guidelines (modified as appropriate) that are outlined in the quantitative assessment protocol for subtidal reefs (**Section 2.2.2**).

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### 2.2.7 Tidal Marshes

The main objectives of the monitoring program will be to determine whether marsh plants at the site survive and multiply to a density comparable to a natural marsh, by estimating marsh coverage. Marsh vegetation species and the presence of non-native invasive species should be identified. An assessment of the physical condition of the plants (e.g., as a result of weather conditions), and outside stressors (such as grazing by geese) will be undertaken. As log and woody debris can cause smothering of marsh vegetation, accumulations of debris will need to be noted and, in some cases, quantified and georeferenced. Habitat-specific maintenance and/or remedial recommendations (e.g., supplemental planting, removal of invasive plant species, installation of protective fencing to stop grazing, etc.) should also be identified.

Marsh assessment methods (adapted from GWL Williams and Associates Ltd.) will include:

- Establishment of sample plots using a stratified random sampling approach. The number of plots to be established will be based on an evaluation of statistical significance relating to the size of the created or restored site, with plot locations randomly assigned for subsequent follow-up in the field. Plots will be geo-referenced to facilitate follow-up evaluations;
- Marsh vegetation colonization will be evaluated on the basis of percent areal coverage. A statistically relevant number of quadrats will be determined for each target habitat type at each constructed site (elevation often determines target habitat type). Quadrats will typically be established along pre-determined transects. Within each 1 m x 1 m quadrat, percent coverage will be visually estimated and assigned to specific coverage classes (i.e., >0-5%; >5-25%; >25-50%; >50-75%; and >75-100%);
- If desired, a subset of plots can be evaluated for stem density and stem length; and
- A marsh soil analysis may be undertaken to determine particle size, physical characteristics, and fertility. Soil analyses are typically conducted during the first monitoring event as a baseline if physical features are ruled out for sites that are not achieving success in a typical timeframe.

Note that the measurement of standing biomass (e.g., weight of above-ground and/or below-ground biomass) requires destructive sampling and is not proposed as removal of plant material over multiple years may confound inter-annual comparisons as well as affect the establishment of marsh vegetation. Factors such as herbivory by wildlife (e.g., grazing by geese) or wrack deposition (i.e., accumulation of dead plant matter) on the marsh may also contribute to unrepresentative measures of standing biomass. In addition, gathering standing biomass measurements is extremely labour intensive. Hence, non-destructive methods (e.g., estimating percent areal cover and counting stems) are recommended for estimating marsh coverage.

## Backshore and Riparian Habitats

Backshore and riparian habitats can generally be accessed without restrictions due to tidal conditions (i.e., there is a low risk of the backshore/riparian habitats being covered by tides). For easier identification of species, it is recommended that assessments occur later in the growing season (e.g., in the summer or early fall).

### 2.2.8 Grass/Herbs and Tree/Shrubs

Monitoring for riparian grass/herbs (e.g., dune grass) and tree/shrub habitat will focus on an evaluation of plant survival and vegetation cover and establishment. Vegetation health and potential issues of concern (e.g., wildlife browse, occurrence of invasive plant species, poor soil conditions, trampling by pedestrians, etc.) will be documented. Any maintenance and/or remediation needs (e.g., wildlife browse control, supplemental planting, weeding, watering, etc.) will be identified.

Goals for revegetation success include 80% coverage of herbaceous vegetation (when compared to reference sites) and 80% survival of transplanted trees and shrubs. Backshore and riparian assessment methods will include:

- Establishment of sampling plots. The number of plots to be established will be based on an evaluation of statistical significance for the size of the created habitat area, with plot locations randomly assigned for subsequent follow-up in the field. These plots will be geo-referenced to facilitate revisiting of the same locations during each year of the project's monitoring program. The quantitative assessment will include an evaluation of riparian vegetation established, using a stratified random sampling approach;
- For dune grass habitat, vegetation colonization will be evaluated on the basis of percent areal coverage. A statistically relevant number of quadrats will be determined for each target habitat type at each constructed site. Quadrats will typically be established along pre-determined transects. Within each 1 m x 1 m quadrat, percent coverage will be visually estimated and assigned to specific coverage classes (i.e., >0-5%; >5-25%; >25-50%; >50-75%; and >75-100%); and
- For tree/shrub vegetation establishment/survival will be evaluated on the basis of percent canopy coverage or percent stock survival as well as the vigour of transplant stock. Quadrats will be established along pre-determined transects. Typical tree/shrub assessment quadrats will be 10 m x 10 m. Percent canopy coverage will be visually estimated and assigned to specific coverage classes (i.e., >0-5%; >5-25%; >25-50%; >50-75%; and >75-100%), and the live stems of plant species growing within the quadrats will be counted.

## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### 2.2.9 Riparian Wetlands

Dependent on the primary function of the wetland, assessment protocols may differ. For example, wetlands constructed for stormwater management with a secondary function of providing riparian habitat value should be assessed for water quality (e.g., visual assessment of hydrocarbon sheens and stormwater quality, potential eutrophication, etc.). The created features should also be assessed for stability and signs of infilling. If the wetlands are connected to the marine environment via surface flows (e.g., through an outlet channel when it has reached capacity) evidence of scouring at the outlet channel should be investigated. In terms of ecological objectives, the assessment should look at the success of establishing an effective biotic wetland community to maximize water treatment effectiveness (e.g., density of cattails and other plants around the site and identification of native species and non-native/invasive species).

### 2.3 Annual Inspections

For general assurance that habitat in the Habitat Bank is viable and functioning as intended, annual inspections of each site are prescribed for as long as the site remains in the Habitat Bank. Annual inspections will occur after the initial post-construction monitoring period has been completed (i.e., when the habitat is deemed to be stable and functioning as intended). In addition to sites that have completed the initial post-construction monitoring period and are still in the Habitat Bank, habitat parcels that have been withdrawn from the Habitat Bank will require an annual inspection for a minimum of one year following withdrawal of the site from the Habitat Bank to confirm habitat viability.

Although annual inspections are typically not as comprehensive as the other types of monitoring described in this PCMP, the inspections are important to track the overall status of the site for general assurance that the habitat remains functional and to determine if any remedial actions are required.

If the results of the annual inspections indicate that the habitat site is not viable, a follow-up course of action will be discussed with DFO. Appropriate actions may involve the development and implementation of remediation measures. In some cases, it might be necessary to abandon poorly functioning habitat and remove it from the Habitat Bank.

### 2.4 Confirmatory Assessment

Habitat parcels targeted for withdrawal from the Habitat Bank must be functioning as intended. Functionality will be confirmed through a confirmatory assessment that identifies the biophysical characteristics of the site. The confirmatory assessments will generally consist of a single monitoring effort, unless the previous post-construction monitoring inspection did not readily document successful achievement of nominally fully functioning habitat.

Confirmatory assessments will follow the quantitative assessment approach described in the "Initial Post-Construction Monitoring Period" section for each habitat type in **Section 2.2** of this document. The monitoring will typically include quantitative and qualitative monitoring of a reference site, for comparison with results of a targeted reference habitat site. It is also understood that DFO may require that additional parameters be considered during the confirmatory assessment. The confirmatory assessment may also focus on other attributes (e.g., to determine if the biophysical characteristics of the habitat site are suitable for offsetting impacts at a potential development site).



## VANCOUVER FRASER PORT AUTHORITY | Post-Construction Monitoring Plan

### **2.5 Additional Assessments**

It is acknowledged that additional assessments may be required, in accordance with the provisions within the Agreement or as stipulated in project-specific authorizations or permits. For instance, additional post-construction monitoring efforts may be specifically requested by DFO, including confirmation that withdrawn habitat credits are maintaining their intended function.

It is understood that any additional assessment requirements would be project- or site-specific and that the required monitoring methodology will need to be determined in consultation with DFO.

### **3.0 Reporting**

As outlined in the Agreement, an annual monitoring report to DFO is required to ensure appropriate tracking of sites in the Habitat Bank. This annual monitoring report should include a description of the sites currently in the Habitat Bank, the site-specific monitoring reports from that year, and the anticipated monitoring program for the next year. Site-specific monitoring reports from the year will typically include a description of the monitoring methodology, observations and data, photo documentation, and a summary with a conclusion and recommendations.

### **4.0 Conclusion**

The PCMP is a working document that has been developed with input from DFO, to outline protocols for the assessment of habitat created, restored or enhanced under the VFPA Habitat Enhancement Program. The PCMP outlines how specific habitat types will be monitored in accordance with the Agreement between VFPA and DFO and with the Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting.

**From:** Assier, Gilles <Gilles.Assier@portvancouver.com>  
**Sent:** Monday, February 04, 2019 4:17 PM  
**To:** Fanos, Brad  
**Subject:** RE: VFPA-DFO habitat arrangement

Thanks Brad. Byron has already provided comments along the way. We hope that additional comments will be provided early in February to give us time to discuss and make the last necessary changes if needed.

Regards,

Gilles  
Office/Cell: 604-665-9078

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**From:** Fanos, Brad [mailto:Brad.Fanos@dfo-mpo.gc.ca]  
**Sent:** February-04-19 1:58 PM  
**To:** Assier, Gilles <Gilles.Assier@portvancouver.com>  
**Subject:** RE: VFPA-DFO habitat arrangement

Hi Gilles  
I am working with Cheryl on a review and approval process prior to the agreement expiring end of March.

Lets talk end of February.

Thanks  
Brad

**Brad Fanos**  
Director, Fish and Fish Habitat Protection Program  
Ecosystem Management Branch  
Fisheries and Oceans Canada / Government of Canada  
[brad.fanos@dfo-mpo.gc.ca](mailto:brad.fanos@dfo-mpo.gc.ca) / Tel: 604-666-3909 / Cell: 604 789 3201

Directeur, Programme de la protection du poisson et de son habitat  
Gestion des écosystèmes  
Pêches et Océans Canada / Gouvernement du Canada  
[brad.fanos@dfo-mpo.gc.ca](mailto:brad.fanos@dfo-mpo.gc.ca) / tél : 604-666-3909 / cell : 604-789-3201

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**From:** Assier, Gilles <[Gilles.Assier@portvancouver.com](mailto:Gilles.Assier@portvancouver.com)>  
**Sent:** February-04-19 11:52 AM  
**To:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>  
**Subject:** VFPA-DFO habitat arrangement

Hi Brad,

Hope all is well. When we met we discussed the new Habitat Arrangement. We are excited to have a draft ready. Cheryl signed the original one and the 2 extensions. Would you be signing the new one?

Thanks.

**Gilles Assier**

Director, Container Terminal Construction



**Vancouver Fraser Port Authority**

100 The Pointe, 999 Canada Place

Vancouver, B.C. Canada V6C 3T4

P: 604-665-9078 | CELL: 778-231-4394

[portvancouver.com](http://portvancouver.com)

No information has been removed or severed from this page

**Hwang, Jason**

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**From:** Nutton, Byron  
**Sent:** February-04-19 8:40 AM  
**To:** Hwang, Jason  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement  
  
**Importance:** High

The template provided in the interim guidance is for RD, EMB sign-off.

I haven't talked to anyone in Policy – do you have any suggestions? If it is a matter of contacting Sarah Murdoch, would that be better coming from you?

---

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** 2019-February-02 8:24 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** Fwd: renewal of VFPA Habitat Banking Arrangement

Hi Byron. Can you follow up on the points Brad has asked about?

----- Original message -----

**From:** "Fanos, Brad" <Brad.Fanos@dfo-mpo.gc.ca>  
**Date:** 2019-02-02 8:04 AM (GMT-08:00)  
**To:** "Hwang, Jason" <Jason.Hwang@dfo-mpo.gc.ca>, "Magnan, Alain" <Alain.Magnan@dfo-mpo.gc.ca>  
**Cc:** "Nutton, Byron" <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Jason

Can you please confirm the sign off level as RD or RDG. A formal briefing note should be considered as a way to track the decision. Also there has been a more formal regional agreement process for vetting (and assessing risks) through RDG to confirm the legislative and mandate authorities and linkages with other sectors and programs. Please confirm from policy if this is still required for DFO agreements .

---

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** February-01-19 4:15 PM  
**To:** Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Hi Brad and Al. This matter requires action from you. I have highlighted in yellow the main action point in Byron's email below. Byron provides a good summary of context in his note. As you are likely aware VFPA is anxious to see this resolved before the current agreement expires. If you have any questions or want to discuss any context let us know, otherwise we await your approval so that we can get back to VFPA.

Jason

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-01-19 4:02 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Jason,

As discussed, please see attached the latest version of the proposed renewed Port of Vancouver Habitat Bank Arrangement. This version incorporates the changes DFO put forward in March 2018, and other than minor editorial changes it remains the same since that time. Please note that I have already updated the identified DFO contact from Team Lead, PSG, FPP to Manger, Integrated Planning, FFHPP to reflect our new organizational structure.

VFPA is looking for confirmation that DFO still supports this draft so that it can be put through final formatting and sent up for sign-off before the current agreement expires at the end of March. Please note that, consistent with the guidance document, the DFO sign-off is Regional Director, EMB.

**One outstanding item to be resolved:**

**Duration of the Arrangement:** The current Working Agreement was effective for 5 years, but it was considered to be a pilot/trial and VFPA is interested in a longer term for the new arrangement (20+ years). The RD had previously identified concerns with such a long term and was supportive of a 10 year term. In the most recent draft VFPA have suggested a compromise of 15 years. My recommendation is that we accept the 15 year term, particularly given that the arrangement provides for a review at the end of each five (5) years period during which the Arrangement is in effect.

**Indigenous engagement summary:**

During the fall of 2018 DFO and VFPA completed the jointly developed Indigenous engagement plan. The notes from each of the 3 engagement sessions held in the fall of 2018 were sent to the participants in early January and a final summary report will be sent later today.

Based on input received during the engagement VFPA is considering some changes to Annex G which documents the engagement process that VFPA will undertake in relation to their future management of the habitat bank, and both DFO and VFPA have agreed to change terminology from “conservation project” to “habitat banking project” in the final version of the arrangement to address concerns raised at the engagement sessions – these edits are not yet reflected in the attached draft.

Please note that the Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process in favour of continuing one-on-one discussions with VFPA and DFO that have been on-going since 2017. Confirmation from TWN regarding their support (or at least lack of opposition) is outstanding, but it is my understanding that they are close to reaching an separate bi-lateral agreement with VFPA to resolve any remaining concerns and I will ensure that the outcome of these discussions is documented and forwarded prior to the arrangement being forwarded for sign-off.

**Reminder of major items that were considered and resolved prior to and including the edits provided by DFO in March 2018, as reflected in the attached draft:**

**Use of Credits by 3<sup>rd</sup> parties:** The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.

**Credit valuation:** The Interim Guide suggests that habitat credit valuation be mutually agreed upon based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.

**Land tenure:** Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

**Indigenous Engagement:** DFO and VFPA cooperatively developed an Indigenous Engagement plan and held early engagement meetings with Indigenous groups to engage and seek feedback on the habitat bank as well as VFPAs plan for engagement related to future proponent-led habitat banking projects. A report detailing the *Summary of Indigenous Engagement on VFPA and DFOs Habitat Bank Arrangement* is in final draft and is in progress of being shared with Indigenous groups for comment. Comments received by Indigenous groups have been reconciled and DFOs response to concerns brought forward are addressed in the report.

**Pow, Tiffany**

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**From:** Nichol, Monica  
**Sent:** Tuesday, February 5, 2019 3:56 PM  
**To:** Murdoch, Sarah; Lawrie, Kirsten  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

I will check with the FMAs tomorrow....as this has a process that EMB is aware of not sure why this seems different.

**From:** Murdoch, Sarah <Sarah.Murdoch@dfo-mpo.gc.ca>  
**Sent:** February-05-19 10:24 AM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Cc:** Nichol, Monica <Monica.Nichol@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Stacee used to be a resource on collaborative agreements... but we haven't done anything in a while. Expectation may be still that Policy & EA supports Branches with this, but I have a feeling it may have gone to CFO, so cc'ing Monica to check?

If it's us, I'd say Jenny could take this on when she is back, but don't think we have capacity to help at all before that last week of Feb.

SM

**Sarah Murdoch**

Regional Director/ Directrice regionale

NOTE NEW ROLE UNTIL FEB 2019 - Special Project - BC Salmon Restoration and Innovation Fund (BCSRIF)/ Projet spécial - Fonds de restauration et d'innovation pour le saumon de la Colombie-Britannique

Fisheries and Oceans Canada, Pacific Region / Pêches et Océans Canada, Région du Pacifique

tel. 604-666-7963/ cell. 604-312-9440

[Sarah.Murdoch@pac.dfo-mpo.gc.ca](mailto:Sarah.Murdoch@pac.dfo-mpo.gc.ca)

**From:** Lawrie, Kirsten  
**Sent:** Tuesday, February 5, 2019 10:14 AM  
**To:** Murdoch, Sarah <Sarah.Murdoch@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Sarah,

Do you have any idea as to who may be working on this – I haven't seen it before.

KL

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** February-04-19 11:20 PM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Kirsten. As per the note below from Brad Fanos, can you advise if there is a current regional process for vetting and assessing risks for new agreements a program is working on? We have been working on an update to a long-standing habitat banking agreement with the Vancouver-Fraser Port Authority, and we are ready to send the current draft through both organizations for sign off. If there is someone in Policy we should be working with on this please let us know – Byron Nutton (cc: on this email) will be our lead contact on this.

Thanks. Jason

**From:** Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>  
**Sent:** February-02-19 8:04 AM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

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**Subject:** FW: renewal of VFPA Habitat Banking Arrangement  
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**Sent:** February-01-19 4:02 PM  
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Credit valuation: The Interim Guide suggests that habitat credit valuation be mutually agreed up on based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.

Land tenure: Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e.,

conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

**Indigenous Engagement:** DFO and VFPA cooperatively developed an Indigenous Engagement plan and held early engagement meetings with Indigenous groups to engage and seek feedback on the habitat bank as well as VFPAs plan for engagement related to future proponent-led habitat banking projects. A report detailing the *Summary of Indigenous Engagement on VFPA and DFOs Habitat Bank Arrangement* is in final draft and is in progress of being shared with Indigenous groups for comment. Comments received by Indigenous groups have been reconciled and DFOs response to concerns brought forward are addressed in the report.

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## Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Wednesday, February 6, 2019 3:01 PM  
**To:** Nutton, Byron; Thorpe, Suzanne  
**Cc:** Ruffo, Gord  
**Subject:** Thursday Feb 7 Call w VFPA - Agenda and Materials  
**Attachments:** 2019-02-07-03-600-VFPA-AGENDA-VFPA and DFO Liaison Meeting\_No 50-Rev0.docx; 2019-01-24-03-600-VFPA-HEP-DFO Meeting Actions-UPDATED FOR FEB 7-Rev1.docx

Hi Byron and Suzanne,

Ahead of our 10am call tomorrow, attached is:

1. Agenda to guide the call
2. Actions List – status of items updated following our last call on Jan 24<sup>th</sup>

Call number is in the Outlook invite, but just in case:

- +1-604-449-3026 (Vancouver)
- Attendee access code: [REDACTED]

Looking forward to speaking tomorrow.

Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



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**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)



## Meeting Agenda

### Habitat Enhancement Program

#### DFO / VFPA Liaison Meeting: Conference Call – February 2019

Meeting No. 50

**Location:** Conference Call (VFPA Vancouver Meeting Room)

**Date:** Thursday February 7th (10:00 AM– 11:00 AM)

<b>Attendees:</b>	Byron Nutton (DFO)	Charlotte Olson (VFPA)
	Suzanne Thorpe (DFO)	Gord Ruffo (VFPA)

#### **AGENDA:**

1. Review of Agenda
2. Priority Actions & Timelines – to support Arrangement execution by March 2019
  - a) Status of IG Summary Report to conclude Indigenous Engagement
    - VFPA has issued final draft report to IGs the week of Feb 4<sup>th</sup>
  - b) Discuss status of Timeline to execute new Arrangement in Q1 2019
    - VFPA legal incorporating DFO Feb 1 comments into February 2019 Arrangement version, ready for DFO by Feb 15/19
    - Status of Brad Fanos/Director review? BN to provide update to VFPA
      - DFO to confirm signatory to Arrangement
    - DFO and VFPA to target a final document ready for execution as of March 8 2019
3. Other Items for Discussion
4. Next Steps/Actions

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sont des duplicatas des  
pages 1618 to / à 1619**

## Thorpe, Suzanne

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**From:** Nutton, Byron  
**Sent:** Thursday, February 7, 2019 11:24 AM  
**To:** Thorpe, Suzanne  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

FYI

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** 2019-February-04 11:20 PM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Kirsten. As per the note below from Brad Fanos, can you advise if there is a current regional process for vetting and assessing risks for new agreements a program is working on? We have been working on an update to a long-standing habitat banking agreement with the Vancouver-Fraser Port Authority, and we are ready to send the current draft through both organizations for sign off. If there is someone in Policy we should be working with on this please let us know – Byron Nutton (cc: on this email) will be our lead contact on this.

Thanks. Jason

**From:** Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>  
**Sent:** February-02-19 8:04 AM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Jason

Can you please confirm the sign off level as RD or RDG. A formal briefing note should be considered as a way to track the decision. Also there has been a more formal regional agreement process for vetting(and assessing risks) through RDG to confirm the legislative and mandate authorities an linkages with other sectors and programs. Please confirm from policy if this is still required for DFO agreements .

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** February-01-19 4:15 PM  
**To:** Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Hi Brad and Al. This matter requires action from you. I have highlighted in yellow the main action point in Byron's email below. Byron provides a good summary of context in his note. As you are likely aware VFPA is anxious to see this resolved before the current agreement expires. If you have any questions or want to discuss any context let us know, otherwise we await your approval so that we can get back to VFPA.

Jason

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-01-19 4:02 PM

To: Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>

Subject: RE: renewal of VFPA Habitat Banking Arrangement

Importance: High

Jason,

As discussed, please see attached the latest version of the proposed renewed Port of Vancouver Habitat Bank Arrangement. This version incorporates the changes DFO put forward in March 2018, and other than minor editorial changes it remains the same since that time. Please note that I have already updated the identified DFO contact from Team Lead, PSG, FPP to Manger, Integrated Planning, FFHPP to reflect our new organizational structure.

VFPA is looking for confirmation that DFO still supports this draft so that it can be put through final formatting and sent up for sign-off before the current agreement expires at the end of March. Please note that, consistent with the guidance document, the DFO sign-off is Regional Director, EMB.

**One outstanding item to be resolved:**

Duration of the Arrangement: The current Working Agreement was effective for 5 years, but it was considered to be a pilot/trial and VFPA is interested in a longer term for the new arrangement (20+ years). The RD had previously identified concerns with such a long term and was supportive of a 10 year term. In the most recent draft VFPA have suggested a compromise of 15 years. My recommendation is that we accept the 15 year term, particularly given that the arrangement provides for a review at the end of each five (5) years period during which the Arrangement is in effect.

**Indigenous engagement summary:**

During the fall of 2018 DFO and VFPA completed the jointly developed Indigenous engagement plan. The notes from each of the 3 engagement sessions held in the fall of 2018 were sent to the participants in early January and a final summary report will be sent later today.

Based on input received during the engagement VFPA is considering some changes to Annex G which documents the engagement process that VFPA will undertake in relation to their future management of the habitat bank, and both DFO and VFPA have agreed to change terminology from “conservation project” to “habitat banking project” in the final version of the arrangement to address concerns raised at the engagement sessions – these edits are not yet reflected in the attached draft.

Please note that the Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process in favour of continuing one-on-one discussions with VFPA and DFO that have been on-going since 2017. Confirmation from TWN regarding their support (or at least lack of opposition) is outstanding, but it is my understanding that they are close to reaching an separate bi-lateral agreement with VFPA to resolve any remaining concerns and I will ensure that the outcome of these discussions is documented and forwarded prior to the arrangement being forwarded for sign-off.

**Reminder of major items that were considered and resolved prior to and including the edits provided by DFO in March 2018, as reflected in the attached draft:**

Use of Credits by 3<sup>rd</sup> parties: The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the

2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.

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**From:** Scoble, Jemma  
**Sent:** Thursday, February 7, 2019 12:17 AM  
**To:** [REDACTED]  
**Subject:** Final Draft Summary Report DFO/VFPA Indigenous Consultation Summary Report  
**Attachments:** 2019-02-01 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev0-FINAL DRAFT.pdf

**Importance:** High

Hi Everyone,

Attached please find a draft summary report of the VFPA/DFO Habitat Bank engagement for review and comment by workshop attendees. I didn't have an email [REDACTED] so I am hoping you can please share this with them. A hard copy of the draft report is also being sent to you.

We are planning to finalize the report at the end of the month and would really appreciate receiving any comments you may have by February 27, 2019.

Please don't hesitate to contact me to discuss the attached, this email request or should you have any questions in relation to the VFPA Habitat Enhancement Program.

Thank you again for all of your contributions at the workshop!

Regards  
Jemma

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**Jemma Scoble**  
Aboriginal Consultation Support



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9000 | C: 778.822.7240  
[portvancouver.com](http://portvancouver.com)

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**HABITAT BANK ARRANGEMENT:  
PORT OF VANCOUVER HABITAT BANK  
SUMMARY OF INDIGENOUS ENGAGEMENT ON  
VFPA AND DFO'S HABITAT BANK  
ARRANGEMENT**

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### Table of Contents

1.	Overview and Purpose .....	3
2.	Indigenous Groups within VFPA's Operational Area .....	3
3.	Engagement Activities .....	5
	<i>3.1 Information Packages.....</i>	<i>6</i>
	<i>3.2 Information Sessions .....</i>	<i>6</i>
	<i>3.3 One-on-One meetings .....</i>	<i>7</i>
4.	Attendance Records for Information Sessions .....	7
5.	Presentations & Other Materials .....	9
6.	Concerns, Issues and Input Received .....	9
7.	Responses and Next Steps .....	12
8.	Reporting .....	14
<b>Appendices.....</b>		<b>15</b>

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 1. Overview and Purpose

Vancouver Fraser Port Authority (VFPA) currently operates a habitat bank that was created through a formal Working Agreement (2012) with Fisheries and Oceans Canada (DFO). This agreement will expire in March 31, 2019. Prior to entering into a new long-term Habitat Bank Arrangement, DFO and VFPA have undertaken engagement to ensure:

- Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program (HEP); and,
- Indigenous groups are provided information regarding VFPA and DFOs intent to enter into a renewed long-term Habitat Bank Arrangement.

Both VFPA and DFO recognize the importance of undertaking meaningful engagement and consultation, based on considerations for good governance, enhanced relations and advancing reconciliation, as well as improving project outcomes. Through engagement VFPA and DFO endeavor to foster opportunities for collaboration, and seek support and input from Indigenous groups to advance the VFPA-DFO Habitat Bank Arrangement.

This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements. Content presented in this report was jointly prepared by VFPA and DFO.

### 2. Indigenous Groups within VFPA's Operational Area

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement and regular communication, as well as by ensuring that the protection of fish and fish habitat are considered in the development of the Asia-Pacific Gateway.

Vancouver Fraser Port Authority operates within the asserted traditional territories of 37 Coast Salish Indigenous groups and in proximity to the treaty settlement lands of the Tsawwassen First Nation (refer to Figure 1 on the next page).

## VFPA AND DFO'S HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement



### Figure 1

The following Indigenous groups' asserted traditional territories or treaty lands intersect with the lands and waters managed by VFPA:

- Musqueam Indian Band
- Squamish Nation
- Tsleil-Waututh Nation
- Tsawwassen First Nation
- Kwikwetlem First Nation
- Katzie First Nation
- Semiahmoo First Nation
- Qayqayt First Nation
- Hwlitsum
- Hul'qumi'num Treaty Group
  - Cowichan Tribes
  - Lake Cowichan First Nation
  - Penelakut Tribe
  - Halalt First Nation
  - Stz'uminus First Nation

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

- Lyackson First Nation
- Sto:lo Nation
  - Aitchelitz First Nation
  - Leq'a:mel First Nation
  - Matsqui First Nation
  - Popkum First Nation
  - Shxwha:y Village First Nation
  - Skawahlook First Nation
- Sto:lo Tribal Council
  - Chawathil First Nation
  - Cheam First Nation
  - Kwantlen First Nation
  - Kwaw-kwaw-Apilt First Nation
  - Scowlitz First Nation
  - Seabird Island First Nation
  - Shxw'ow'hamel First Nation
  - Skowkale First Nation
  - Soowahlie First Nation
  - Squiala First Nation
  - Sumas First Nation
  - Tzeachten First Nation
  - Yakweakwioose First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### 3. Engagement Activities

The following activities were undertaken:

- An letter was sent to Indigenous groups inviting them to attend the VFPA-DFO information sessions
- Information packages were shared as attachments to the invitation letters

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

- Follow up telephone calls were made to Indigenous groups to ensure receipt of the materials as well as to garner support for attendance at the face-to-face information sessions
- Face-to-face information sessions were held in 3 locations
- Additional communication and/or one-on-one meetings were offered

### **3.1 Information Packages**

Information packages were shared with the Indigenous groups identified in Section 2. These packages included:

- A description of how habitat banks are used to offset serious harm to fisheries.
- A description of how habitat credits are deposited into the habitat bank.
- A description of how habitat credits may be withdrawn from the habitat bank and the DFO-led Indigenous consultation process associated with this withdrawal.
- An overview of VFPA's Aboriginal Consultation and Engagement Process for proposed habitat banking projects. This process demonstrates how VFPA intends to engage and consult with Indigenous groups within the identified service area and identifies how Indigenous input and knowledge will be considered throughout the project identification, development, construction and post-construction phases. Opportunities for Indigenous c (e.g. technical design review, fieldwork, monitoring, contracting, employment and training) will also be identified as well as the process for reporting back to Indigenous groups on feedback received.
- Other relevant materials (e.g. Habitat Enhancement Program presentations, project overview/information sheets, map of Habitat Enhancement Program projects, etc.).

VFPA confirmed receipt of this information by Indigenous groups through follow up communications. VFPA provided responses to any questions, comments and input from Indigenous groups received in advanced of focused information sessions.

### **3.2 Information Sessions**

Three information sessions (Lower Mainland, Vancouver Island and Fraser Valley) were arranged to provide an accessible location for participants that required minimal travel. A proposed agenda was provided in advance of these sessions for review by participants.

Key components of these information sessions:

- Presentation of the materials included in the Information Packages
- Questions from Indigenous groups and response by VFPA and DFO
- Recording of information and input received as well as concerns or issues raised by Indigenous groups

The schedule for these Information sessions was as follows:

DATE	LOCATION / VENUE
<u>Information Session No.1</u>	Vancouver, BC

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

September 11, 2018	VFPA Office
<u>Information Session No.2</u> October 16, 2018	Brentwood Bay, BC Brentwood Bay Resort
<u>Information Session No.3</u> November 29, 2018	Chilliwack, BC People of the River Referrals Office

### 3.3 One-on-One meetings

One-on-one meetings or other types of engagement activities (e.g., presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. TWN advised VFPA that they would not participate in the VFPA/DFO engagement sessions regarding the HEP and new Habitat Bank Arrangement as they are already engaged in ongoing discussions with VFPA and DFO regarding administration of VFPA's habitat bank.

No other requests for meetings, additional information or feedback have been received to date.

## 4. Attendance Records for Information Sessions

### Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	
Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

### Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo Sinead Deery

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VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

Information Session No. 3 – Chilliwack, BC (November 29, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	
Lower Fraser Fisheries Alliance	

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## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 5. Presentations & Other Materials

Presentations and other materials shared during the VFPA/DFO engagement included the following:

- Package of information and accompanying letter (August 2018)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation
  - Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a *Fisheries Act* Authorization
  - Proponent-led Habitat Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

### 6. Concerns, Issues and Input Received

Several key topics were raised during this engagement process. Input that VFPA and DFO received included the following:

#### **VFPA-DFO Habitat Bank Arrangement:**

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation.
- Importance of ensuring that constructed project sites are protected into the future.
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required.

#### **Habitat Banking (specifically):**

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects.
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### **VFPA/HEP Engagement Processes:**

- General comment that the HEP consultation is understood and has been effective.
- General support for projects built to date and consultation process undertaken by VFPA.
- Desire for Indigenous involvement in all aspects and phases of HEP projects: provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- Interest in providing input into what is monitored (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Sharing of information: collection data, monitoring data, fish use data, construction monitoring reports. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.). There is value in making information available.
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Suggestion to work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

### **DFO Indigenous Consultation and Regulatory Processes:**

- General consultation concerns: adequacy of consultation at all levels of First Nations governance (for all aspects of habitat banking, including the policy itself). Suggestion that DFO consult at a higher level at First Nations' organizations.
- Concerns that DFO consultation is completed on a project by project basis – one project at a time when Authorization is sought. Importance of First Nations being informed of projects that do not get an Authorization due to impacts.
- Concern that the Crown is swayed to grant Authorizations if habitat is already banked.
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights.
- Guiding principles for offsetting should include that offsetting be done to also support First Nations cultural values.
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries.
- General perspective that habitat is not "created" but only restored; something must be displaced to create new habitat.
- There is perception that DFO approves all authorizations.
- Comment that there is a need to use Western science and Traditional Knowledge in the monitoring and evaluation of projects.
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

- Comment that First Nations do not feel properly consulted by DFO.

### **General, Scientific, Technical and Cultural:**

- Request for projects to be built on the South Arm of the Fraser River and Vancouver Island.
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consideration of climate change, sea level rise and flood management in project planning.
- General interest in shellfish restoration & other food-harvest value species.
- Cultural considerations are important: intertwine legacy and cultural history into projects.
- Cultural loss of marine aquatic species (e.g., clam beds).
- Development of educational resources, including First Nations specific educational aspects and opportunities (e.g., important species, cultural history).
- Need for balance: infrastructure development and healthy environment.
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat that VFPA is enhancing.

### **General state of the environment:**

- Concern regarding the inability to compensate for historic impacts / damage / destruction of environment – lack of industry accountability for historic damages / destruction of habitat.
- Need for a balance of infrastructure development and the environment.
- Concern regarding the impacts of dyking on the lower Fraser River.
- Concern regarding the impacts of fish farms.
- Importance needs to be placed on protecting native species.
- Access to and health of marine aquatic species (e.g., clam beds) for First Nations.

### **Other:**

- *Fisheries Act* review comments not adequately addressed from an Indigenous perspective; comment that the review processes was too short.
- Importance of long-term foreshore management planning and VFPA support of this work and other initiatives.
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 7. Responses and Next Steps

#### **VFPA-DFO Habitat Bank Arrangement and Habitat Banking Specifically:**

In response to concern brought forward regarding the term "*conservation project*" in the context of habitat banking, DFO and VFPA have adopted the use of the term "*habitat banking projects*" in the Port of Vancouver Habitat Bank Arrangement, and DFO will consider the same for any future Habitat Banking Arrangements that might be proposed in the Pacific Region. In addition, this concern has been communicated to DFO staff in Ottawa that work on the development of habitat banking guidance.

Both DFO and VFPA recognize the importance of ensuring that habitat banking project sites are protected into the future. In this regard, VFPA will monitor and manage projects to meet their objectives until such a time as the credits associated with those projects are removed from the bank, and in the longer-term those sites will be subject to the protection provisions of the *Fisheries Act*.

Comments and concerns with respect to early engagement and consultation related to habitat banking are addressed by VFPA and DFO, respectively in the two sections below.

#### **VFPA/HEP Engagement Processes:**

VFPA will review the Habitat Enhancement Program consultation process in light of the input received to consider opportunities to improve its effectiveness. VFPA will:

- Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including the provision of input to: project identification, collection of data, design, construction, monitoring and specifically, in goal-setting, decision-making and evaluation.
- Consider opportunities and a process for enhanced integration of Indigenous input and identification of priorities into planning for monitoring (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, and work happening by other organizations (e.g., Indigenous, NGO, governments, etc.).
- Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.

#### **DFO Indigenous Consultation and Regulatory Processes:**

The Government of Canada is committed to advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, Inuit-Crown and government-to-government relationship based on the recognition of rights, respect, cooperation and partnership. Fisheries and Oceans Canada is now also in the early stages of reviewing its laws and policies and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

As outlined in DFO's "Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led Habitat Bank Arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the *Fisheries Act* or *Species at Risk Act*. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led Habitat Bank Arrangement.

DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposes to use banked habitat credits as part of an Application for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet offsetting requirements.

Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction, monitoring and evaluation of projects will be considered by DFO for any Habitat Banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

### **General, Scientific, Technical and Cultural and General state of the Environment:**

DFO and VFPA appreciate the input provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective organizations. These items and concerns will continue to be considered moving forward.

In particular, with respect to habitat banking VFPA will identify opportunities to integrate the input received, as well as the priorities and ideas raised during the engagement process. VFPA will:

- Consider producing cultural/educational materials for habitat banking projects and the Habitat Enhancement Program.
- Work with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
- Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consider opportunities (i.e., workshops and initiatives) related to shellfish restoration & other food-harvest value species.
- Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.
- Consider opportunities for DNA analysis to be undertaken on fish stocks in foreshore habitats that VFPA is enhancing.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### **Other:**

Comments regarding DFO's consultation process related to the review of the *Fisheries Act* have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

### **8. Reporting**

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and input shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement. DFO and VFPA will:

- Share this report, along with copies of the habitat banking-related information presented during the engagement process.
- Notify Indigenous groups when a new DFO-VFPA Habitat Bank Arrangement is in place.
- Respond to any future questions or requests for information related to the DFO-VFPA Habitat Bank Arrangement.

The Habitat Enhancement Program provides for ongoing engagement and consultation which allows for continued opportunities to address any concern or issues. HEP will provide opportunities to Indigenous groups to identify and where possible, advance priority projects in collaboration with VFPA.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### Appendices

**Appendix 01** – Information Packages Provided to Indigenous Groups

**Appendix 02** – VFPA Presentation Material

**Appendix 03** – DFO Presentation Material

**Appendix 04** – DFO Frequently Asked Questions

**Appendix 05** – Meeting Record from September 11, 2018 Information Session (Vancouver)

**Appendix 06** – Meeting Record from October 16, 2018 Information Session (Vancouver Island)

**Appendix 07** – Meeting Record from November 29, 2018 Information Session (Fraser Valley)



**From:** Scoble, Jemma  
**Sent:** Thursday, February 7, 2019 12:33 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** FW: Final Draft Summary Report DFO/VFPA Indigenous Consultation Summary Report  
**Attachments:** 2019-02-01 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev0-FINAL DRAFT.pdf  
**Importance:** High

[REDACTED]

Attached please find a draft summary report of the VFPA/DFO Habitat Bank engagement for review and comment by Musqueam. A hard copy of the draft report is also being sent to you. [REDACTED] attended the Vancouver workshop and I am hoping you can share this draft with them. Please note that the appendices are not included in this version but the draft workshop notes were sent to attendees for review/comment and the referenced materials were previously shared. They will be included in the final report.

We are planning to finalize the report at the end of the month and would really appreciate receiving any comments you may have by February 27, 2019.

Please don't hesitate to contact me to discuss the attached, this email request or should you have any questions in relation to the VFPA Habitat Enhancement Program.

Thank you again for your participation at the workshop!

Regards  
Jemma

s.19(1)

**Jemma Scoble**  
Aboriginal Consultation Support



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9000 | C: 778.822.7240  
[portvancouver.com](http://portvancouver.com)

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pages 1962 to / à 1976**

**From:** Scoble, Jemma  
**Sent:** Thursday, February 7, 2019 12:42 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Final Draft Summary Report DFO/VFPA Indigenous Consultation Summary Report  
**Attachments:** 2019-02-01 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev0-FINAL DRAFT.pdf  
**Importance:** High

Hi Everyone,

Attached please find a draft summary report of the VFPA/DFO Habitat Bank engagement for review and comment by workshop attendees/the CNA. A hard copy of the draft report is also being sent to you.

We are planning to finalize the report at the end of the month and would really appreciate receiving any comments you may have by February 27, 2019.

Please don't hesitate to contact me to discuss the attached, this email request or should you have any questions in relation to the VFPA Habitat Enhancement Program.

Thank you again [REDACTED] for your participation in the workshop!

Regards  
Jemma

s.19(1)

**Jemma Scoble**  
Aboriginal Consultation Support



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9000 | C: 778.822.7240  
[portvancouver.com](http://portvancouver.com)

*This message is directed in confidence solely to the person(s) named above and may contain confidential or private information which is not to be disclosed. If you are not the addressee or an authorized representative thereof, please contact the message sender and then destroy the message in its entirety. Thank you.*

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pages 1962 to / à 1976**

## Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Friday, February 8, 2019 12:40 PM  
**To:** Nutton, Byron; Thorpe, Suzanne  
**Cc:** Ruffo, Gord; Scoble, Jemma; [REDACTED]  
**Subject:** RE: Thursday Feb 7 Call w VFPA - Actions and Follow Up  
**Attachments:** 2019-02-07-03-600-VFPA-HEP-DFO Meeting Actions-Rev0.docx

Hi Byron and Suzanne, thanks for the call yesterday

Please find attached the updated Actions list from Feb 7/19.

Suzanne, please note that Jemma is currently in Iceland, so VFPA will provide the IG notification records that you asked for (see item #5 on actions list), when Jemma returns (by Feb 22).

Also, [REDACTED]  
VFPA will include these items as discussed with DFO, within our next Arrangement version:

1. Keep the proposed term as 15yrs in the February 2019 Arrangement draft
2. Cheryl Webb is still the signatory (as of right now)
3. DFO's response to the VFPA "NTD" question in Section 12 was simply that the template had this review section included. DFO did offer that the template had the wording "**may** review" rather than our current draft that has "**will** review". [REDACTED]  
[REDACTED]
4. DFO's response to the "NTD" comment in Annex F was that the following legislation title should be italicized, otherwise they confirmed that the reference is correct:  
"Indigenous consultation will normally take place after DFO has received an Application for Authorization and determined that the information requirements set out in the *Applications for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations*"

As discussed, I expect to get the February 2019 version of the Arrangement back to you by Feb 15 (next Friday) at the latest. We are getting close!

Have a great weekend all.

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

s.19(1)  
s.21(1)(a)  
s.21(1)(b)

**From:** Olson, Charlotte  
**Sent:** Wednesday, February 06, 2019 3:01 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>; 'Thorpe, Suzanne' <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>  
**Subject:** Thursday Feb 7 Call w VFPA - Agenda and Materials

Hi Byron and Suzanne,

Ahead of our 10am call tomorrow, attached is:

1. Agenda to guide the call
2. Actions List – status of items updated following our last call on Jan 24<sup>th</sup>

Call number is in the Outlook invite, but just in case:

- +1-604-449-3026 (Vancouver)
- Attendee access code: [REDACTED]

Looking forward to speaking tomorrow.  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
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s.16(2)(c)

**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**
**DATE:** February 7, 2019 (10am-11:00am)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING – February 21 (10am Conference Call)**
**ATTENDEES:**
**DFO Representatives:**

Byron Nutton (BN), DFO  
Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO)

**CURRENT MEETING ACTIONS (STATUS - updated following Feb 7/19 Call):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
<b>2019 Actions:</b>				
1.	Byron to reach out to [REDACTED] (TWN) regarding DFO's required 'close-out' related to engagement on VFPA-DFO Arrangement	DFO (BN)	Per Byron	Note TWN is moving offices the week of Feb 4-8
2.	DFO and VFPA are committed to working toward a FINAL Arrangement, ready for signatures by March 8/19 at the latest	VFPA (CO) DFO (BN)	Feb 15	VFPA is incorporating recent DFO input into a February 2019 version of the Arrangement draft, ready for DFO by Feb 15/19. After that, parties need to work together to ensure a final signable document is complete by March 8.
3.	VFPA to provide DFO with 2018 Annual Report(s)	VFPA (CO)	Feb 15 target	VFPA is targeting Feb 15 for these report submittals (2) to DFO.
4.	VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)	VFPA (CO)	Week of Feb 25 target	VFPA is targeting week of Feb 25 <sup>th</sup> for this submittal. VFPA is currently working with TWN to prepare a joint submission to DFO on this aspect. The submittal will include the MMRP Project Confirmation Document, as well as the MMRP Assisted Assessment.

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
5.	VFPA to provide DFO (ST) record of the distribution of 1) Meeting Summary Notes; and 2) IG Summary Report	JS	Feb 22	Jemma Scoble will provide this record upon her return [REDACTED]

s.19(1)



**Hwang, Jason**

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**From:** Triana, Jhoely  
**Sent:** February-08-19 12:26 PM  
**To:** Nutton, Byron; Hwang, Jason  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Guys,

Do you mind sending me the the latest version of the proposed renewed Port of Vancouver Habitat Bank Arrangement?

It's come around to me Monica has requested more info.

It might be worth having a meeting between the two of you, Monica and I to make sure we are all on the same page.

Thanks,

Jhoely Triana  
Business Manager  
Ecosystems Management Branch  
Department of Fisheries and Oceans Canada  
200-401 Burrard Street,  
Vancouver, BC  
V6C 3S4  
jhoely.triana@dfo-mpo.gc.ca  
604-666-1138

---

**From:** Nichol, Monica <Monica.Nichol@dfo-mpo.gc.ca>  
**Sent:** February-08-19 8:54 AM  
**To:** Triana, Jhoely <Jhoely.Triana@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi!

Do you know anything about this....do you have a copy is it a collaborative agreement?

---

**From:** Murdoch, Sarah <Sarah.Murdoch@dfo-mpo.gc.ca>  
**Sent:** February-05-19 10:24 AM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Cc:** Nichol, Monica <Monica.Nichol@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Stacee used to be a resource on collaborative agreements... but we haven't done anything in a while. Expectation may be still that Policy & EA supports Branches with this, but I have a feeling it may have gone to CFO, so cc'ing Monica to check?

If it's us, I'd say Jenny could take this on when she is back, but don't think we have capacity to help at all before that last week of Feb.

SM

**Sarah Murdoch**

Regional Director/ Directrice regionale

NOTE NEW ROLE UNTIL FEB 2019 - Special Project - BC Salmon Restoration and Innovation Fund (BCSRIF)/ Projet spécial - Fonds de restauration et d'innovation pour le saumon de la Colombie-Britannique

Fisheries and Oceans Canada, Pacific Region / Pêches et Océans Canada, Région du Pacifique

tel. 604-666-7963/ cell. 604-312-9440

[Sarah.Murdoch@pac.dfo-mpo.gc.ca](mailto:Sarah.Murdoch@pac.dfo-mpo.gc.ca)

---

**From:** Lawrie, Kirsten

**Sent:** Tuesday, February 5, 2019 10:14 AM

**To:** Murdoch, Sarah <[Sarah.Murdoch@dfo-mpo.gc.ca](mailto:Sarah.Murdoch@dfo-mpo.gc.ca)>

**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Sarah,

Do you have any idea as to who may be working on this – I haven't seen it before.

KL

---

**From:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>

**Sent:** February-04-19 11:20 PM

**To:** Lawrie, Kirsten <[Kirsten.Lawrie@dfo-mpo.gc.ca](mailto:Kirsten.Lawrie@dfo-mpo.gc.ca)>

**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>

**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Kirsten. As per the note below from Brad Fanos, can you advise if there is a current regional process for vetting and assessing risks for new agreements a program is working on? We have been working on an update to a long-standing habitat banking agreement with the Vancouver-Fraser Port Authority, and we are ready to send the current draft through both organizations for sign off. If there is someone in Policy we should be working with on this please let us know – Byron Nutton (cc: on this email) will be our lead contact on this.

Thanks. Jason

---

**From:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>

**Sent:** February-02-19 8:04 AM

**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>; Magnan, Alain <[Alain.Magnan@dfo-mpo.gc.ca](mailto:Alain.Magnan@dfo-mpo.gc.ca)>

**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>

**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Jason

Can you please confirm the sign off level as RD or RDG. A formal briefing note should be considered as a way to track the decision. Also there has been a more formal regional agreement process for vetting(and assessing risks) through

RDG to confirm the legislative and mandate authorities an linkages with other sectors and programs. Please confirm from policy if this is still required for DFO agreements .

---

**From:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Sent:** February-01-19 4:15 PM  
**To:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>; Magnan, Alain <[Alain.Magnan@dfo-mpo.gc.ca](mailto:Alain.Magnan@dfo-mpo.gc.ca)>  
**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Hi Brad and Al. This matter requires action from you. I have highlighted in yellow the main action point in Byron's email below. Byron provides a good summary of context in his note. As you are likely aware VFPA is anxious to see this resolved before the current agreement expires. If you have any questions or want to discuss any context let us know, otherwise we await your approval so that we can get back to VFPA.

Jason

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**From:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Sent:** February-01-19 4:02 PM  
**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Jason,

As discussed, please see attached the latest version of the proposed renewed Port of Vancouver Habitat Bank Arrangement. This version incorporates the changes DFO put forward in March 2018, and other than minor editorial changes it remains the same since that time. Please note that I have already updated the identified DFO contact from Team Lead, PSG, FPP to Manger, Integrated Planning, FFHPP to reflect our new organizational structure.

VFPA is looking for confirmation that DFO still supports this draft so that it can be put through final formatting and sent up for sign-off before the current agreement expires at the end of March. Please note that, consistent with the guidance document, the DFO sign-off is Regional Director, EMB.

**One outstanding item to be resolved:**

Duration of the Arrangement: The current Working Agreement was effective for 5 years, but it was considered to be a pilot/trial and VFPA is interested in a longer term for the new arrangement (20+ years). The RD had previously identified concerns with such a long term and was supportive of a 10 year term. In the most recent draft VFPA have suggested a compromise of 15 years. My recommendation is that we accept the 15 year term, particularly given that the arrangement provides for a review at the end of each five (5) years period during which the Arrangement is in effect.

**Indigenous engagement summary:**

During the fall of 2018 DFO and VFPA completed the jointly developed Indigenous engagement plan. The notes from each of the 3 engagement sessions held in the fall of 2018 were sent to the participants in early January and a final summary report will be sent later today.

Based on input received during the engagement VFPA is considering some changes to Annex G which documents the engagement process that VFPA will undertake in relation to their future management of the

habitat bank, and both DFO and VFPA have agreed to change terminology from “conservation project” to “habitat banking project” in the final version of the arrangement to address concerns raised at the engagement sessions – these edits are not yet reflected in the attached draft.

Please note that the Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process in favour of continuing one-on-one discussions with VFPA and DFO that have been on-going since 2017. Confirmation from TWN regarding their support (or at least lack of opposition) is outstanding, but it is my understanding that they are close to reaching an separate bi-lateral agreement with VFPA to resolve any remaining concerns and I will ensure that the outcome of these discussions is documented and forwarded prior to the arrangement being forwarded for sign-off.

**Reminder of major items that were considered and resolved prior to and including the edits provided by DFO in March 2018, as reflected in the attached draft:**

Use of Credits by 3<sup>rd</sup> parties: The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.

Credit valuation: The Interim Guide suggests that habitat credit valuation be mutually agreed up on based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.

Land tenure: Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

Indigenous Engagement: DFO and VFPA cooperatively developed an Indigenous Engagement plan and held early engagement meetings with Indigenous groups to engage and seek feedback on the habitat bank as well as VFPAs plan for engagement related to future proponent-led habitat banking projects. A report detailing the *Summary of Indigenous Engagement on VFPA and DFOs Habitat Bank Arrangement* is in final draft and is in progress of being shared with Indigenous groups for comment. Comments received by Indigenous groups have been reconciled and DFOs response to concerns brought forward are addressed in the report.

## Hwang, Jason

---

**From:** Nutton, Byron  
**Sent:** February-08-19 12:40 PM  
**To:** Triana, Jhoely  
**Cc:** Hwang, Jason  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement  
**Attachments:** Interim\_Guide\_to\_Proponent-led\_Hatitat\_Banking.pdf; Clean Version - VFPA Habitat Bank Arrangement 2019-01.docx

Hi Jhoely,

Latest version attached as requested.

Also, just a couple minutes ago I sent a short note to Monica, which you might see from her as well, advising that the arrangement in question is based on the template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking*, October 2016 (attached for your reference).

I am happy to have a chat...I believe Jason is busy today so perhaps we could look at something early next week? My Outlook calendar is up to date, and although it says I have the day off on Monday I could be available for a call, or could even come to RHQ in person if that would helpful as I'm going to be in Vancouver anyway.

Thanks for your time,

Byron

---

**From:** Nutton, Byron  
**Sent:** 2019-February-08 11:53 AM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>; Nichol, Monica <Monica.Nichol@dfo-mpo.gc.ca>  
**Cc:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Hi Kirsten and Monica,

Please note that the arrangement in question is based on the template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking*, October 2016 (attached for your reference).

I hope this bit of additional context is helpful in your consideration.

Thanks for your time,

*Byron Nutton, RPBio*

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

**From:** Lawrie, Kirsten <[Kirsten.Lawrie@dfo-mpo.gc.ca](mailto:Kirsten.Lawrie@dfo-mpo.gc.ca)>  
**Sent:** 2019-February-08 11:31 AM  
**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Hi Jason,

I hadn't forgotten about you – Sarah had mentioned that Policy doesn't have the capacity to do this, but had a feeling that it may fall under CFO now – she had reached out to Monical Nichol who was taking a look further into it.

Thanks,

KL

**From:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Sent:** February-04-19 11:20 PM  
**To:** Lawrie, Kirsten <[Kirsten.Lawrie@dfo-mpo.gc.ca](mailto:Kirsten.Lawrie@dfo-mpo.gc.ca)>  
**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Kirsten. As per the note below from Brad Fanos, can you advise if there is a current regional process for vetting and assessing risks for new agreements a program is working on? We have been working on an update to a long-standing habitat banking agreement with the Vancouver-Fraser Port Authority, and we are ready to send the current draft through both organizations for sign off. If there is someone in Policy we should be working with on this please let us know – Byron Nutton (cc: on this email) will be our lead contact on this.

Thanks. Jason

**From:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>  
**Sent:** February-02-19 8:04 AM  
**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>; Magnan, Alain <[Alain.Magnan@dfo-mpo.gc.ca](mailto:Alain.Magnan@dfo-mpo.gc.ca)>  
**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Jason

Can you please confirm the sign off level as RD or RDG. A formal briefing note should be considered as a way to track the decision. Also there has been a more formal regional agreement process for vetting (and assessing risks) through RDG to confirm the legislative and mandate authorities and linkages with other sectors and programs. Please confirm from policy if this is still required for DFO agreements .

**From:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Sent:** February-01-19 4:15 PM  
**To:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>; Magnan, Alain <[Alain.Magnan@dfo-mpo.gc.ca](mailto:Alain.Magnan@dfo-mpo.gc.ca)>  
**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>

**Subject:** FW: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Hi Brad and Al. This matter requires action from you. I have highlighted in yellow the main action point in Byron's email below. Byron provides a good summary of context in his note. As you are likely aware VFPA is anxious to see this resolved before the current agreement expires. If you have any questions or want to discuss any context let us know, otherwise we await your approval so that we can get back to VFPA.

Jason

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-01-19 4:02 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Jason,

As discussed, please see attached the latest version of the proposed renewed Port of Vancouver Habitat Bank Arrangement. This version incorporates the changes DFO put forward in March 2018, and other than minor editorial changes it remains the same since that time. Please note that I have already updated the identified DFO contact from Team Lead, PSG, FPP to Manger, Integrated Planning, FFHPP to reflect our new organizational structure.

VFPA is looking for confirmation that DFO still supports this draft so that it can be put through final formatting and sent up for sign-off before the current agreement expires at the end of March. Please note that, consistent with the guidance document, the DFO sign-off is Regional Director, EMB.

**One outstanding item to be resolved:**

Duration of the Arrangement: The current Working Agreement was effective for 5 years, but it was considered to be a pilot/trial and VFPA is interested in a longer term for the new arrangement (20+ years). The RD had previously identified concerns with such a long term and was supportive of a 10 year term. In the most recent draft VFPA have suggested a compromise of 15 years. My recommendation is that we accept the 15 year term, particularly given that the arrangement provides for a review at the end of each five (5) years period during which the Arrangement is in effect.

**Indigenous engagement summary:**

During the fall of 2018 DFO and VFPA completed the jointly developed Indigenous engagement plan. The notes from each of the 3 engagement sessions held in the fall of 2018 were sent to the participants in early January and a final summary report will be sent later today.

Based on input received during the engagement VFPA is considering some changes to Annex G which documents the engagement process that VFPA will undertake in relation to their future management of the habitat bank, and both DFO and VFPA have agreed to change terminology from "conservation project" to "habitat banking project" in the final version of the arrangement to address concerns raised at the engagement sessions – these edits are not yet reflected in the attached draft.

Please note that the Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process in favour of continuing one-on-one discussions with VFPA and DFO that have been on-going since 2017. Confirmation from TWN regarding their support (or at least lack of opposition) is outstanding, but it is



my understanding that they are close to reaching an separate bi-lateral agreement with VFPA to resolve any remaining concerns and I will ensure that the outcome of these discussions is documented and forwarded prior to the arrangement being forwarded for sign-off.

**Reminder of major items that were considered and resolved prior to and including the edits provided by DFO in March 2018, as reflected in the attached draft:**

**Use of Credits by 3<sup>rd</sup> parties:** The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.

**Credit valuation:** The Interim Guide suggests that habitat credit valuation be mutually agreed up on based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.

**Land tenure:** Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

**Indigenous Engagement:** DFO and VFPA cooperatively developed an Indigenous Engagement plan and held early engagement meetings with Indigenous groups to engage and seek feedback on the habitat bank as well as VFPAs plan for engagement related to future proponent-led habitat banking projects. A report detailing the *Summary of Indigenous Engagement on VFPA and DFOs Habitat Bank Arrangement* is in final draft and is in progress of being shared with Indigenous groups for comment. Comments received by Indigenous groups have been reconciled and DFOs response to concerns brought forward are addressed in the report.



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**Pages 2064 to / à 2100**  
**are duplicates**  
**sont des duplicatas**

**Hwang, Jason**

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**From:** Hwang, Jason  
**Sent:** February-09-19 8:53 AM  
**To:** Nutton, Byron  
**Subject:** VFPA

Hi Byron. Brad said we will need a Briefing Note to go with the VFPA agreement when we send it up for sign off. Can you put a note together now so that we have it ready to go as soon as we get our advice back from Policy. You can write the BN assuming Cheryl is the sign off, and we can change that if needed later.  
Jason

No information has been removed or severed from this page

**Hwang, Jason**

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**From:** Hwang, Jason  
**Sent:** February-12-19 2:19 PM  
**To:** Nutton, Byron  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

I have not done anything on it yet. Can you tee it up?

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-12-19 2:18 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Hey. Any progress with organizing a call, or do you want me to set it up?

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** 2019-February-11 10:09 AM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** Re: renewal of VFPA Habitat Banking Arrangement

[REDACTED] I should be good anytime after 1:00.

Sent from my BlackBerry 10 smartphone on the Rogers network.

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**From:** Hwang, Jason  
**Sent:** Monday, February 11, 2019 9:33 AM  
**To:** Nutton, Byron  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

s.19(1)

Are you available for a call today if I set it up?

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**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-08-19 12:40 PM  
**To:** Triana, Jhoely <Jhoely.Triana@dfo-mpo.gc.ca>  
**Cc:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Jhoely,

Latest version attached as requested.

Also, just a couple minutes ago I sent a short note to Monica, which you might see from her as well, advising that the arrangement in question is based on the template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking*, October 2016 (attached for your reference).

I am happy to have a chat...I believe Jason is busy today so perhaps we could look at something early next week? My Outlook calendar is up to date, and although it says I have the day off on Monday I could be available for a call, or could even come to RHQ in person if that would helpful as I'm going to be in Vancouver anyway.

Thanks for your time,

Byron

**From:** Nutton, Byron

**Sent:** 2019–February-08 11:53 AM

**To:** Lawrie, Kirsten <[Kirsten.Lawrie@dfo-mpo.gc.ca](mailto:Kirsten.Lawrie@dfo-mpo.gc.ca)>; Nichol, Monica <[Monica.Nichol@dfo-mpo.gc.ca](mailto:Monica.Nichol@dfo-mpo.gc.ca)>

**Cc:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>

**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Hi Kirsten and Monica,

Please note that the arrangement in question is based on the template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking*, October 2016 (attached for your reference).

I hope this bit of additional context is helpful in your consideration.

Thanks for your time,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices

Fisheries Protection Program | Programme de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

250-618-4268

**From:** Lawrie, Kirsten <[Kirsten.Lawrie@dfo-mpo.gc.ca](mailto:Kirsten.Lawrie@dfo-mpo.gc.ca)>

**Sent:** 2019–February-08 11:31 AM

**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>

**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>

**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

Hi Jason,

I hadn't forgotten about you – Sarah had mentioned that Policy doesn't have the capacity to do this, but had a feeling that it may fall under CFO now – she had reached out to Monical Nichol who was taking a look further into it.

Thanks,

KL

**From:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>

**Sent:** February-04-19 11:20 PM

**To:** Lawrie, Kirsten <[Kirsten.Lawrie@dfo-mpo.gc.ca](mailto:Kirsten.Lawrie@dfo-mpo.gc.ca)>

**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement

Hi Kirsten. As per the note below from Brad Fanos, can you advise if there is a current regional process for vetting and assessing risks for new agreements a program is working on? We have been working on an update to a long-standing habitat banking agreement with the Vancouver-Fraser Port Authority, and we are ready to send the current draft through both organizations for sign off. If there is someone in Policy we should be working with on this please let us know – Byron Nutton (cc: on this email) will be our lead contact on this.

Thanks. Jason

**From:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>  
**Sent:** February-02-19 8:04 AM  
**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>; Magnan, Alain <[Alain.Magnan@dfo-mpo.gc.ca](mailto:Alain.Magnan@dfo-mpo.gc.ca)>  
**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement

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**From:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Sent:** February-01-19 4:15 PM  
**To:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>; Magnan, Alain <[Alain.Magnan@dfo-mpo.gc.ca](mailto:Alain.Magnan@dfo-mpo.gc.ca)>  
**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Subject:** FW: renewal of VFPA Habitat Banking Arrangement  
**Importance:** High

Hi Brad and Al. This matter requires action from you. I have highlighted in yellow the main action point in Byron's email below. Byron provides a good summary of context in his note. As you are likely aware VFPA is anxious to see this resolved before the current agreement expires. If you have any questions or want to discuss any context let us know, otherwise we await your approval so that we can get back to VFPA.

Jason

**From:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Sent:** February-01-19 4:02 PM  
**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Subject:** RE: renewal of VFPA Habitat Banking Arrangement  
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Jason,

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VFPA is looking for confirmation that DFO still supports this draft so that it can be put through final formatting and sent up for sign-off before the current agreement expires at the end of March. Please note that, consistent with the guidance document, the DFO sign-off is Regional Director, EMB.

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**Indigenous engagement summary:**

During the fall of 2018 DFO and VFPA completed the jointly developed Indigenous engagement plan. The notes from each of the 3 engagement sessions held in the fall of 2018 were sent to the participants in early January and a final summary report will be sent later today.

Based on input received during the engagement VFPA is considering some changes to Annex G which documents the engagement process that VFPA will undertake in relation to their future management of the habitat bank, and both DFO and VFPA have agreed to change terminology from “conservation project” to “habitat banking project” in the final version of the arrangement to address concerns raised at the engagement sessions – these edits are not yet reflected in the attached draft.

Please note that the Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process in favour of continuing one-on-one discussions with VFPA and DFO that have been on-going since 2017. Confirmation from TWN regarding their support (or at least lack of opposition) is outstanding, but it is my understanding that they are close to reaching an separate bi-lateral agreement with VFPA to resolve any remaining concerns and I will ensure that the outcome of these discussions is documented and forwarded prior to the arrangement being forwarded for sign-off.

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construction with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.

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## Hwang, Jason

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**From:** Nutton, Byron  
**Sent:** February-13-19 11:42 AM  
**To:** Hwang, Jason  
**Subject:** renewal of VFPA Habitat Banking Arrangement

So, having heard back from both Monica and Jhoely that they are definitely not the correct contacts I will cancel the meeting invite.

At this point do I go back to Kirsten in Policy with some additional clarification (i.e. it is not "banking" nor a Contribution Agreement or anything else financial) and ask again about a Regional process for vetting agreements? Personally I think this issue is fairly contained within FPP, and any overlap with other sectors (SEP, etc.) is not really much different than for typical Authorization/Offsetting and even then largely contained within EMB, but please let me know your thoughts/direction.

I note that Monica suggests [REDACTED] My thoughts are that it is based on the template in the guidance document [REDACTED] There are a few differences – the third party use of credits in particular – but Cheryl has been aware/informed/consulted on our handling of those issues during negotiation, and both Brad and Al have been clear that we should be keeping it in Region and not send it to NHQ or legal.

Give me a call when you have a chance if you want to discuss – I'll be at my desk except for 12:30-1:30 [REDACTED]  
[REDACTED]

Thanks,

Byron

**From:** Nutton, Byron  
**Sent:** 2019-February-13 10:34 AM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** call

I just got off my bilat with Suzanne and tried you.

I see that you are busy the rest of the morning and a good chunk of the afternoon.

s.19(1)  
s.21(1)(a)  
s.21(1)(b)  
s.23

[REDACTED]

Otherwise open except for our call with Tola at 1:00.

## Hwang, Jason

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**From:** Hwang, Jason  
**Sent:** February-13-19 8:58 AM  
**To:** Nutton, Byron  
**Subject:** RE: renewal of VFPA Habitat Bank Arrangement

Can you call me to discuss this when you have a minute.

**From:** Nichol, Monica <Monica.Nichol@dfo-mpo.gc.ca>  
**Sent:** February-13-19 8:01 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>; Triana, Jhoely <Jhoely.Triana@dfo-mpo.gc.ca>; Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Cc:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: renewal of VFPA Habitat Bank Arrangement

Hi!

Sorry I am in a course all week. I spoke to Randy and we don't think we need to be involved in this...He did mention that it should may be vetted through Legal. Sarah was thinking this was a CA which it is not. Otherwise as you stated below...maybe it does need to go back to Policy if you were vetting to "confirm the legislative and mandate authorities, and linkages with other sectors and programs".

Kristen I think this may be back to your group please see below.

Thanks!  
Monica

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-12-19 3:46 PM  
**To:** Nichol, Monica <Monica.Nichol@dfo-mpo.gc.ca>; Triana, Jhoely <Jhoely.Triana@dfo-mpo.gc.ca>  
**Cc:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** renewal of VFPA Habitat Bank Arrangement

Hi Monica and Jhoely,

In follow-up to recent e-mail exchanges I am looking to schedule a short meeting to discuss the renewal of the VFPA Habitat Bank Arrangement. It appears that Monica is not available at all this week and that Jason is not available on Monday, so the earliest time we could all get together would be sometime Tuesday – I will pick a time that all of our calendars are open and send an invite shortly.

However, to be honest I am not sure that we have the correct individuals identified – I am just going off the information in the recent e-mail exchanges. This began recently with a request from Brad Fanos during his review of the nearly final draft arrangement, on which we have been negotiating with VFPA and engaging with Indigenous groups over that last couple years. Apparently at some point Policy was managing a regional process for vetting agreements to confirm the legislative and mandate authorities, and linkages with other sectors and programs. Brad asked that Jason enquire with

Policy if this process was still in place, which he did, and based on the e-mail exchanges it appears that Policy forwarded it to yourselves.

I'm not sure how familiar you are with this kind of thing, but I note that your portfolios are related to financial planning and business management and I wonder if the word "banking" has been taken a bit out of context, so please have a look at my summary below and confirm this is something that should be on your plate and/or whether there are others you think should be involved.

A habitat banking arrangement relates to habitat offsetting requirements when FPP issues an Authorization to a developer to allow the destruction of fish habitat. Basically, the developer is required to replace the habitat that is destroyed with new or improved habitat. Typically a developer will negotiate the offsetting plan at the time they are requesting an Authorization and then build both their development and the offsetting at the same time. In contrast, a habitat banking arrangement allows a developer to build the offsetting habitat in advance, and then later propose to use the "habitat credits" in the bank to meet offsetting requirements of some future potential Authorization.

Again, I will send out a meeting invite for Tuesday shortly, but also look forward to your confirmation.

Thanks,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices

Fisheries Protection Program | Programme de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

250-618-4268

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**From:** Thorpe, Suzanne  
**Sent:** Wednesday, February 13, 2019 4:59 PM  
**To:** Nutton, Byron  
**Subject:** Draft BN materials  
**Attachments:** 2019-02-13\_DraftBN\_HBA-signature-recommended.docx

Hi Byron;

Pending the template which may change this content-wise/ order, I have drafted materials for the BN for Cheryl's signature.

Let me know if you want me to massage it some more or, if/ when you receive an updated template – I am happy to work on that if the template does not fit what I have prepared so far.

S.

**Suzanne Thorpe**

Partnerships, Standards and Guidelines/ Partenariats, normes et lignes directrices  
Fisheries Protection Program/ Programme de protection des pêches  
Ecosystem Management Branch / Direction de la gestion des écosystèmes  
Fisheries and Oceans Canada (DFO), Pacific Region/ Pêches et Océans Canada, Région du Pacifique  
Government of Canada/ Gouvernement du Canada  
200-401 Burrard Street, Vancouver BC V6C 3S4 (13<sup>th</sup> Floor)/ 401 Burrard Street, bureau 200, Vancouver (C.-B.) V6C 3S4  
Telephone: (604) 666.3512 or Mobile: (604) 312.7964

**SUMMARY OF ADVICE** (this format is based on the template for the approval to negotiate a HB agreement and could easily be incorporated into background information below, if short summary point are the formatted template desired).

The purpose of this memo is to seek your approval on the Proponent-led Habitat Bank Arrangement ("the Arrangement") for the Port of Vancouver Habitat Bank with the Vancouver Fraser Port Authority.

The Arrangement establishes the terms and conditions for the creation and management of the proponent-led habitat bank by: establishing a working relationship between the Participants based on trust, accountability and information sharing; establishing a transparent process for managing a proponent-led habitat bank; and increasing certainty in the administration and regulation of a proponent-led habitat bank.

The Arrangement also establishes management provisions for its administration: the accountability lies with the Office of the Regional Director, Ecosystems Management, Pacific Region, and the day to day administration of the MOU will be carried out by the Regional Fisheries Protection Program Director, Manager, or Team Leader of Pacific Region of DFO.

The Arrangement supports the Department in achieving its strategic outcome of 'sustainable aquatic ecosystems'; it is consistent with the Departmental MOU policy, the offset policy, and Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking.

Indigenous engagement and consultation was jointly undertaken by DFO and VFPA to seek input on the Arrangement from Indigenous groups with asserted or traditional territories or treaty lands in the service area of the Arrangement. While few, the key concerns, issues and input received have been considered and the consultation process has been concluded.

As the current agreement expires at the end of March, it is recommended that the new Arrangement be executed prior to March 31, 2019. With regard to the valid term of the Arrangement, it is recommended that the Arrangement be valid for a period of 15 years, with review at the end of each five years during which the Arrangement is in effect.

It is recommended that you approve ~~and provide your signature to~~ the Port of Vancouver Habitat Bank Arrangement.

### **Background**

Over the past couple years, DFO's Pacific Region Fisheries Protection Program has worked with the Vancouver Fraser Port Authority (VFPA) on an updated and renewed Proponent-led Habitat Banking Arrangement to replace the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Habitat Bank* (2012), as guided by the program's *Interim Guide to Proponent-led Habitat Banking* (October 2016).

The 2012 Agreement was set to expire in 2017; the Agreement was extended by letter for an additional one year, and then again to March 31, 2019 in order to allow for continued renegotiation of the agreement and for Indigenous engagement and consultation processes to be completed.

Several major considerations in the renewal of the Arrangement have been reconciled, including:

- Use of Credits by 3<sup>rd</sup> parties: The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.
- Credit valuation: The Interim Guide suggests that habitat credit valuation be mutually agreed upon based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction, with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.
- Land tenure: Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.
- Indigenous Engagement: DFO and VFPA cooperatively developed an Indigenous Engagement plan and held early engagement meetings with Indigenous groups to engage and seek feedback on the Habitat Bank Arrangement as well as VFPA's plans for engagement related to future proponent-led habitat banking projects. VFPA produced a report detailing the *Summary of Indigenous Engagement on VFPA and DFOs Habitat Bank Arrangement* and DFOs response to concerns brought forward are addressed in the report. Comments received by Indigenous groups have been reconciled.

<not sure that both sections on Indigenous engagement need to be kept in but I have done so because the BN template may specifically request an IE section – this lends better to choosing what to include or amalgamating, if needed>

### **Indigenous Engagement and Consultation Considerations**

During the fall of 2018, DFO and VFPA completed Indigenous engagement in accordance with a jointly-developed Indigenous engagement plan.

Based on input received during the engagement changes were made to the standardized terminology used in DFO's habitat bank guidance and recommended template. In this regard, both DFO and VFPA agreed to change terminology from "conservation project" to "habitat banking project" in the final version of the arrangement to more aptly describe the .

The Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process; however, the TWN has a new separate bi-lateral agreement with VFPA and no concerns have been brought forward that are specific to the Arrangement.

### **Strategic Considerations**

As the current agreement expires at the end of March, there is a strong desire by VFPA to have the Arrangement executed prior to March 31, 2019.

VFPA has requested a long-term agreement. It should be noted that the Working Agreement was valid for a 5-year period and that VFPA requested a 20-year term. Previous support by the RD was for a 10-year term; however, a compromise has been requested by VFPA. Based on the inclusion review period at the end of each five years during which the Arrangement is in effect, it is recommended that the renewed Arrangement be valid for a period of 15 years.

### **Advice and Recommendations**

It is recommended that you approve and execute the "Habitat Bank Arrangement: Port of Vancouver Habitat Bank" between the Vancouver Fraser Port Authority and the Department prior to the end of this fiscal year.

**Hwang, Jason**

---

**From:** Hwang, Jason  
**Sent:** February-15-19 4:06 PM  
**To:** Nutton, Byron  
**Subject:** RE: renewal of VFPA Habitat Bank Arrangement

Sounds good. thanks

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-15-19 4:03 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Bank Arrangement  
**Importance:** High

Hey Jason,

I left a voicemail after our call this AM, but hadn't heard back so called again just now and spoke to Gabby (unfortunately I didn't get her last name) - she said she hasn't been able to get to it yet.

I did make sure she knows we are under significant pressure and she confirmed she would get back to me on Monday.

I know you said no more e-mails, but I thought it best to follow-up in writing - please see below for the e-mail trail below.

Speaking of Monday, it is taking me a bit longer to get to the Briefing Note so I won't have it done today but it is a nice bit of contained work that I will take home and finish tonight or tomorrow so that it will be waiting for you Monday morning.

Cheers,

Byron

---

**From:** Nutton, Byron  
**Sent:** 2019-February-15 3:56 PM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Bank Arrangement  
**Importance:** High

Hi again Gabby,

Thanks for chatting with me just now.

As I mentioned, I am under quite a bit of pressure to advise my director whether or not there is a formal regional review process that needs to be undertaken before we can move the agreement forward for sign-off.

Again, we are not looking for any help or even requesting that a broader review be undertaken, we just want to be certain that we are not skipping a step if there is a requirement to do such a review.

Thanks again for your time, and I look forward to hearing from you on Monday.



Cheers,

Byron

---

**From:** Nutton, Byron  
**Sent:** 2019-February-13 3:43 PM  
**To:** Lawrie, Kirsten <[Kirsten.Lawrie@dfo-mpo.gc.ca](mailto:Kirsten.Lawrie@dfo-mpo.gc.ca)>  
**Subject:** FW: renewal of VFPA Habitat Bank Arrangement  
**Importance:** High

Hi Gabby (for Kirsten),

As discussed, this is in follow-up to the request from Jason Hwang to Policy (via Kirsten) a couple of weeks ago regarding Fisheries Protection Program (FPP) finalizing the renewal of an existing Habitat Banking arrangement with Vancouver Fraser Port Authority (VFPA). That initial request was forwarded by Kirsten to a couple folks in Finance and Business Management, but it appears that was based on a mis-understanding as both of those people have confirmed they have no "interest" (for lack of a better word) in the issue, so please see the following additional detail/clarification.

This began recently with a request from Brad Fanos (Director, FPP) during his review of the nearly final draft arrangement, on which we have been negotiating with VFPA and engaging with Indigenous groups over that last couple years. According to Brad, at some point Policy was managing a regional process for vetting agreements to confirm the legislative and mandate authorities, and linkages with other sectors and programs. Brad asked that Jason enquire with Policy if this process was still in place, which he did. As mentioned above, based on the subsequent e-mail exchanges, it appears the request was mis-understood/directed. Perhaps the word "banking" was taken a bit out of context, explaining why it was forwarded to finance/business management?

A habitat banking arrangement relates to habitat offsetting requirements when FPP issues an Authorization to a developer to allow the destruction of fish habitat. Basically, the developer is required to replace the habitat that is destroyed with new or improved habitat. Typically a developer will negotiate the offsetting plan at the time they are requesting an Authorization and then build both their development and the offsetting at the same time. In contrast, a habitat banking arrangement allows a developer to build the offsetting habitat in advance, and then later propose to use the "habitat credits" in the bank to meet offsetting requirements of some future potential Authorization. It is all very much contained within FPP operations.

At this point we simply want to be certain that we are going through any broader regional vetting process that Policy is managing (if such a thing exists) before we move it up the line for approval.

I hope this clarifies the issue and the request and I look forward to your response.

As I mentioned on the phone I do have some time constraints, so please don't hesitate to call me if you need anything further.

Thanks for your time,

Byron

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices

Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

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## Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Friday, February 15, 2019 3:32 PM  
**To:** Nutton, Byron; Thorpe, Suzanne  
**Cc:** Ruffo, Gord  
**Subject:** Submittal of VFPA's 2018 YR Annual Reports to DFO  
**Attachments:** 2019-01-21-VFPA-2018 YR DFO Annual Report-Rev0.pdf

Good afternoon Byron and Suzanne

Today, VFPA will be couriering a USB flash drive containing the following two 2018 Year Annual Reports to DFO for your records:

1. VFPA 2018 Year DFO Annual Report – also attached here
2. VFPA 2018 Year DFO Annual Habitat Monitoring Report – too large to email (>25MB)

Note that these reports are consistent with previous years, and have been prepared in accordance with our current Working Agreement.

I have sent one USB flash drive attention to you Byron, in Nanaimo – and a second flash drive to Suzanne at the Vancouver Office.

  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

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vancouver**

## **HABITAT ENHANCEMENT PROGRAM 2018 ANNUAL REPORT**

**Submitted to:**

Fisheries and Oceans Canada  
Byron Nutton, R.P.Bio.  
Team Lead – Partnerships, Standards & Guidelines  
Byron.Nutton@dfo-mpo.gc.ca

**Submitted by:**

Vancouver Fraser Port Authority

Charlotte Olson, P.Geo., PMP  
Manager, Infrastructure Habitat Development  
Habitat Enhancement Program  
Charlotte.Olson@portvancouver.com

Gord Ruffo, P.Eng.  
Senior Project Manager  
Habitat Enhancement Program  
Gord.Ruffo@portvancouver.com

December 2018

## Terminology Used

- **Agreement:** Reference to the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank* between Vancouver Fraser Port Authority and Fisheries and Oceans Canada dated July 31, 2012 (signed September 10, 2012, currently extended to March 31, 2019).
- **Arrangement:** Reference to a proposed habitat banking arrangement (a Memorandum of Understanding as defined under the *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking*, October 2016) between Vancouver Fraser Port Authority and Fisheries and Oceans Canada, which would form the basis for the management and administration of the Vancouver Fraser Port Authority Habitat Bank.
- **As-Built Report:** A report produced upon completion of construction to confirm the dimensions, geometry and locations of all elements of the work completed for a site. The report includes record drawings prepared by a Professional Engineer, and an inspection report prepared by a Qualified Environmental Professional to confirm that the site has been constructed to meet the biological objectives of the project.
- **DFO:** Fisheries and Oceans Canada
- **Habitat Bank:** Vancouver Fraser Port Authority Habitat Bank
- **HEP:** Habitat Enhancement Program
- **Indigenous Engagement Work Plan:** Reference to the *Indigenous Engagement Work Plan for Vancouver Fraser Port Authority's and Fisheries and Oceans Canada's Habitat Bank Arrangement*, May 2018.
- **Interim Guide:** Reference to the *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking*, October 2016.
- **Portfolio:** A software program used by the Vancouver Fraser Port Authority's Real Estate Department to meet tracking and reporting needs for the Vancouver Fraser Port Authority Habitat Bank.
- **ppt:** Parts per thousand (salinity unit)
- **Serious Harm:** Section 35 of the *Fisheries Act* prohibits Serious Harm to fish which is defined as "the death of fish or any permanent alteration to, or destruction of, fish habitat".
- **TWN:** Tsleil-Waututh Nation
- **VFPA:** Vancouver Fraser Port Authority

## Executive Summary

The Vancouver Fraser Port Authority's (VFPA's) Habitat Enhancement Program (HEP) is currently guided by a working agreement (the Agreement) between VFPA and Fisheries and Oceans Canada (DFO) that acknowledges the mutual benefits of a habitat bank to both parties and provides guidelines for the establishment of sites proposed for inclusion in the VFPA Habitat Bank (the Habitat Bank).

This 2018 Annual Report is the sixth annual report to be submitted to DFO since 2013 to document the administration of the Habitat Bank. The report includes a description of the administration of the Habitat Bank, habitat credits currently in the Habitat Bank and a look ahead to proposed future HEP projects. The report also outlines key management issues encountered throughout the operation of the Habitat Bank in 2018, primarily in relation to development of a new Habitat Bank Arrangement.

No habitat transactions occurred in the Habitat Bank in 2018. The current General Ledger, detailing all transactions undertaken in the Habitat Bank since the formation of the HEP program in 2012, and a 2018 Habitat Balance Sheet, can be found in **Appendix E** and **Appendix F**, respectively.

As of December 2018, the Habitat Bank contains 12 habitat sites. The current value of habitat credits in the Habitat Bank using square metres (m<sup>2</sup>) as the area unit metric is 92,227 m<sup>2</sup>. A summary of habitat types and credits in the Habitat Bank is provided below and is outlined in more detail in **Appendix F**.

- **Marine Habitat Credits: 72,864 m<sup>2</sup>**
  - Salt Marsh: 64,882 m<sup>2</sup>
  - Marine Tidal Mudflat: 961 m<sup>2</sup>
  - Marine Tidal Channel: 1,645 m<sup>2</sup>
  - Marine Cobble/Boulder Beach: 401 m<sup>2</sup>
  - Marine Backshore Grass/Herb: 1,889 m<sup>2</sup>
  - Marine Backshore Tree/Shrub: 3,086 m<sup>2</sup>
- **Brackish Habitat Credits: 4,662 m<sup>2</sup>**
  - Brackish Marsh: 4,662 m<sup>2</sup>
- **Freshwater Habitat Credits: 14,701 m<sup>2</sup>**
  - Freshwater Tidal Marsh: 11,924 m<sup>2</sup>
  - Freshwater Tidal Mudflat: 2,777 m<sup>2</sup>

## Table of Contents

<b>Terminology Used .....</b>	<b>i</b>
<b>Executive Summary.....</b>	<b>ii</b>
<b>Introduction .....</b>	<b>1</b>
<b>Administration of the Habitat Bank .....</b>	<b>1</b>
Tracking .....	1
Annual Review .....	1
VFPA and DFO Liaison Activities.....	2
<b>Credits in the Habitat Bank .....</b>	<b>2</b>
<b>General Ledger.....</b>	<b>2</b>
<b>Habitat Balance Sheet .....</b>	<b>3</b>
<b>Anticipated Program for 2019 to 2021 .....</b>	<b>5</b>
Completed Projects .....	5
Cates Landing Habitat Restoration Project.....	5
Priority Projects for 2019 to 2021 .....	5
Maplewood Marine Restoration Project .....	5
Tsawwassen Eelgrass Project .....	6
South Arm Jetty Tidal Marsh Project.....	6
Westham Island/Canoe Pass Tidal Marsh Project.....	6
Secondary Projects .....	7
McDonald Tidal Marsh Project.....	7
Point Grey Tidal Marsh Project.....	7
Sturgeon Bank Restoration Feasibility Project.....	7
<b>Management Issues and Opportunities .....</b>	<b>7</b>
Development of a New Arrangement.....	7
Engagement and Consultation with Indigenous Groups on the Draft Arrangement .....	8
Key Administrative Challenges .....	9
Undefined Processes for Establishing an Arrangement .....	9
Limitation on Habitat Credit Use .....	10
Long-Term Monitoring .....	10

## VANCOUVER FRASER PORT AUTHORITY | 2018 DFO Annual Report

### List of Appendices

- Appendix A** Summary of 2018 VFPA and DFO Meetings
- Appendix B** As-Built Reports (no reports for 2018)
- Appendix C** Credit Transaction Reports (no reports for 2018)
- Appendix D** Map of Habitat Enhancement Program Project Sites - Completed and Proposed
- Appendix E** General Ledger
- Appendix F** 2018 Habitat Balance Sheet

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## Introduction

The Habitat Enhancement Program (HEP) is a Vancouver Fraser Port Authority (VFPA) initiative whose goal is to balance a healthy environment with infrastructure development opportunities. HEP creates and enhances fish and wildlife habitat for habitat banking purposes, use as offsetting for port infrastructure projects, or a combination of both. VFPA Habitat Banking projects are currently being undertaken in accordance with the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank, 2012* (the Agreement) between VFPA and Fisheries and Oceans Canada (DFO) which acknowledges the mutual benefits of a habitat bank to both parties and provides guidelines for the establishment of sites proposed for inclusion in the VFPA Habitat Bank (the Habitat Bank).

In accordance with the Agreement, this 2018 Annual Report evaluates and documents the administration of the Habitat Bank. As outlined in the Agreement, VFPA is responsible for maintaining a general ledger of habitat transactions and producing an annual habitat balance sheet for review by DFO.

This report addresses items outlined in the following sections of the Agreement:

- **Section 4.1:** *The VFPA will be responsible for the administration of the Habitat Bank. Administration will include maintaining a general ledger of all habitat transactions and producing an annual habitat balance sheet for review by DFO in December of any given year of this Working Agreement.*
- **Section 4.4:** *VFPA will review the administration of the Habitat Bank on an annual basis with the goal of improving the habitat banking process and reviewing it for new and emerging opportunities.*

## Administration of the Habitat Bank

### Tracking

VFPA's HEP is responsible for the day-to-day management and delivery of habitat projects and initiatives within the Habitat Bank. VFPA's Legal and Real Estate Departments are responsible for overseeing transactions related to land agreements and contracts. VFPA has customized its real estate software program (Portfolio) to meet specific tracking and reporting needs for the Habitat Bank. All supporting documents, such as Project Confirmation Documents, As-Built Reports and Credit Transaction Reports, are filed in a corresponding Official Records file in VFPA's database. Through ongoing internal audits and continual improvement processes, VFPA actively reviews and implements improvements to the internal document filing processes across the organization.

### Annual Review

VFPA is responsible for reviewing the administration of the Habitat Bank on an annual basis, with the goal of improving the habitat banking process and reviewing it for new and emerging opportunities (per Section 4.4 of the Agreement). The following section of the Annual Report provides an overview of some of the tools used in 2018 to aid in the administration of the Habitat Bank. A detailed summary of potential opportunities and issues encountered during operation of the Habitat Bank in 2018 is provided in the **"Management Issues and Opportunities"** section below.

## VFPA and DFO Liaison Activities

Since the Agreement was signed by DFO and VFPA in September 2012, DFO has engaged on a consistent basis with VFPA's HEP through regular email correspondence, conference calls and in-person meetings. VFPA has been in contact with both DFO Pacific Regional staff and DFO National staff based in Ottawa. Meetings with DFO have provided a forum to discuss Habitat Bank projects, administration of the Habitat Bank, and any issues encountered, or questions raised, during operation of the Habitat Bank.

The majority of the meeting discussions in 2018 were focused on Indigenous engagement to support implementation of a new longer term Arrangement, intending to replace the existing Agreement (which expires in March 2019). The last meeting with DFO National Headquarters staff on October 11, 2018 focused on challenges that VFPA has encountered with administration of its Habitat Bank, and considerations for operation of the Habitat Bank. **Appendix A** provides a summary of the 2018 meetings between DFO and VFPA. Tsleil-Waututh Nation was also in attendance for a meeting with VFPA and DFO Pacific Regional Staff in May 2018. The "**Management Issues and Opportunities**" section below provides a summary of the main topics discussed with DFO in 2018.

VFPA considers these regular meetings with DFO to be valuable for discussing ideas and receiving feedback. Throughout 2019, VFPA would like to continue meeting regularly with DFO with the initial focus of the meetings related to the execution of a new long-term habitat banking Arrangement.

## Credits in the Habitat Bank

The Habitat Bank currently includes credits from 12 habitat sites. No credits were deposited or withdrawn from the Habitat Bank in 2018. As of December 2018, the value of habitat credits in the Habitat Bank using square metres (m<sup>2</sup>) as the area unit metric is 92,227 m<sup>2</sup>.

The As-Built Reports, which are used by VFPA for initial valuation of habitat credits for deposit into the Habitat Bank following site construction, would typically be included in **Appendix B** of the Annual Report; however, since no Habitat Bank projects were constructed in 2018, As-Built Reports are not included in this Annual Report. Similarly, Credit Transaction Reports, would typically be included in **Appendix C** of the Annual Report; however, no transactions were undertaken in 2018.

## General Ledger

The purpose of the general ledger is to provide a record of habitat transactions conducted through the Habitat Bank. The names of the sites currently in the Habitat Bank, their locations and their year of deposit into the Habitat Bank are listed in **Table 1**.

**Table 1. List of Habitat Enhancement Sites Included in the Habitat Bank**

Year of Deposit	Site/Project Name	Location	
		Waterbody	Municipality
2013	Gladstone Park Tidal Marsh	Fraser River	Vancouver
	Riverfront Park Tidal Marsh	Fraser River	Vancouver
	Salt Marsh Restoration Site 3.1	Roberts Bank	Delta
	Salt Marsh Restoration Site 3.3	Boundary Bay	Delta
	Salt Marsh Restoration Site 3.4	Boundary Bay	Delta
	Salt Marsh Restoration Site 3.5	Boundary Bay	Delta
	Salt Marsh Restoration Site 3.2	Roberts Bank	Delta
2014	Timberland Basin Habitat	Fraser River	Surrey
	Glenrose Downstream Tidal Marsh	Fraser River	Delta
	Glenrose Cannery Tidal Marsh	Fraser River	Delta
	Gunderson Mudflat Tidal Marsh	Fraser River	Delta
2017	New Brighton Park Shoreline Habitat Restoration Project	Burrard Inlet	Vancouver

**Appendix D** presents a map of sites currently in the Habitat Bank and sites proposed for future development and inclusion in the Habitat Bank. Additional site-specific project information is available at <http://www.portvancouver.com/environment/water-land-wildlife/habitat-enhancement/>. Please see the attached General Ledger in **Appendix E** for more information on credit transactions and remaining credit balance.

## Habitat Balance Sheet

The purpose of the habitat balance sheet is to provide a breakdown of the total fish habitat credits remaining at each site for each habitat type within the Habitat Bank. Currently there are nine habitat types in the Habitat Bank (as defined below). The habitat types are located within the backshore and tidal zones. The tidal and salt wedge influences are the defining physiochemical characteristics of habitats currently included in the Habitat Bank and are used to determine if the habitat is located in a marine, brackish or freshwater environment.

Within the Lower Mainland, marine habitats exhibit salinities typically greater than 18 parts per thousand (ppt) (e.g., New Brighton Park Shoreline Habitat Restoration Project in Burrard inlet). Brackish habitats occur in the Fraser River estuary (e.g., Gladstone Park Tidal Marsh in the Fraser River North Arm) and are typified by salinities between 0.5 and 18 ppt. Freshwater habitats, with salinity less than 0.5 ppt, occur upstream of the Fraser River salt wedge (which typically ends at Annacis Island; e.g., Glenrose Cannery Tidal Marsh).

Specific habitat types in the Habitat Bank are described in further detail below.

### Marine Habitats

- **Salt Marsh:** Vegetated intertidal fish habitat, established in areas of predominantly saltwater influence, typified by salt-tolerant emergent plants.
- **Marine Tidal Mudflat:** Unvegetated intertidal fish habitat, established in areas of predominantly saltwater influence, typically colonized by saltwater-tolerant benthic algal and infaunal invertebrate communities. Tidal saltwater mudflats typically occur in lower energy saltwater areas, where sand, silt, clay and organic matter accumulate, or at stream mouths.

## VANCOUVER FRASER PORT AUTHORITY | 2018 DFO Annual Report

- **Marine Tidal Channel:** Fish habitat that conveys saltwater, nutrients, sediment, and biota through intertidal habitats and can provide rearing areas for fish, wildlife, and invertebrates.
- **Marine Cobble/Boulder Beach:** Nearshore marine habitat consisting of cobbles and boulders that often support algal and invertebrate species.
- **Marine Backshore Grass/Herb:** Marine shoreline habitat, located above and within 30 metres of the Higher High Water Large Tide elevation, consisting of graminoid and herbaceous plants that are tolerant of coastal sea spray (e.g., dune grass (*Leymus mollis*)).
- **Marine Backshore Tree/Shrub:** Native tree and shrub habitat, located within 30 metres of the Higher High Water Large Tide elevation, in areas of predominantly saltwater influence.

### **Brackish Habitats**

- **Brackish Marsh:** Vegetated intertidal fish habitat, established in areas of saltwater and freshwater influence, typified by moderately salt-tolerant emergent plants.

### **Freshwater Habitats**

- **Freshwater Tidal Marsh:** Vegetated intertidal fish habitat, established in areas of predominantly freshwater influence, typified by freshwater emergent plants.
- **Freshwater Tidal Mudflat:** Unvegetated intertidal fish habitat, established in areas of predominantly freshwater influence, typically colonized by freshwater-tolerant benthic algal and infaunal invertebrate communities. Tidal freshwater mudflats occur upstream of the salt wedge, typically in lower energy freshwater areas, where sand, silt, clay and organic matter accumulate, or at stream mouths.

A summary of the current habitat balance for the Habitat Bank is provided below:

- **Marine Habitat Credits: 72,864 m<sup>2</sup>**
  - Salt Marsh: 64,882 m<sup>2</sup>
  - Marine Tidal Mudflat: 961 m<sup>2</sup>
  - Marine Tidal Channel: 1,645 m<sup>2</sup>
  - Marine Cobble/Boulder Beach: 401 m<sup>2</sup>
  - Marine Backshore Grass/Herb: 1,889 m<sup>2</sup>
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  - Freshwater Tidal Marsh: 11,924 m<sup>2</sup>
  - Freshwater Tidal Mudflat: 2,777 m<sup>2</sup>

More information related to the current fish habitat credits associated with each habitat site and type is presented in the Habitat Balance Sheet in **Appendix F**.

## **Anticipated Program for 2019 to 2021**

The projects described in the following subsections are anticipated to be pursued by VFPA's HEP between 2019 and 2021. The projects are grouped into "completed projects" (i.e., projects that have been completed but have not yet been deposited into the Habitat Bank), "priority projects" (i.e., projects where construction is targeted to start between 2019 and 2021), and "secondary projects" (i.e., lower priority projects being pursued by VFPA's HEP). The decision to advance relevant habitat projects is dependent on the execution of a long-term Arrangement, future development requirements, necessary permits and approvals, and Indigenous engagement and stakeholder consultation. A map depicting the location of sites anticipated for inclusion in the 2019 to 2021 program is included in **Appendix D** and additional site-specific project information is available at <http://www.portvancouver.com/environment/water-land-wildlife/habitat-enhancement/>.

### **Completed Projects**

#### ***Cates Landing Habitat Restoration Project***

The Cates Landing Habitat Restoration Project site is located south of 3825 Cates Landing Way, along the north shore of Burrard Inlet, east of the Second Narrows Bridge in North Vancouver, British Columbia. The project, undertaken by Polygon Homes Ltd. (Polygon), involved site decommissioning and remediation of two water lots previously used for marine-related industrial purposes, followed by habitat restoration and creation. The site was restored to marine tidal and backshore fish habitat. Demolition of existing infrastructure was completed in June 2015 with foreshore remediation, re-grading, restoration and planting works taking place between October 2015 and June 2017. Since project completion in 2017, under Licence agreement with VFPA, Polygon is conducting annual post-construction monitoring at the site to ensure the biophysical objectives are being met, and any relevant remedial works are implemented. Under agreement with VFPA, Polygon is responsible for monitoring the site annually, and implementation of any remedial works for a period of five-years post-construction.

As communicated to DFO in 2018, further engagement on habitat bank credit values for this project with Tsleil-Waututh Nation is anticipated to be undertaken in 2019 by VFPA, including any future proposed deposit into the Habitat Bank.

### **Priority Projects for 2019 to 2021**

#### ***Maplewood Marine Restoration Project***

The Maplewood Marine Restoration Project (MMRP) lies within VFPA jurisdiction on the north shore of Burrard Inlet, approximately two kilometres east of the Ironworkers Memorial Bridge. The Project is immediately south of the Maplewood Flats Conservation Area, which is under VFPA jurisdiction but is leased and managed by Environment and Climate Change Canada and the Wild Bird Trust of British Columbia. The Project lies within a marine tidal basin up to nine metres deep (the Maplewood Basin) and an intertidal area to the south of the Maplewood Basin. The Maplewood Basin consists of the previously dredged area of Maplewood Flats, encompassing the Northeast Basin and Main Basin. The Maplewood Basin was dredged in the 1940s to support gravel extraction and was later used as a log storage facility. The Project is anticipated to enhance approximately 70,000 m<sup>2</sup> (7 hectares (ha)) of low-value marine habitat into higher-value marine habitat for fish, birds, and other wildlife. Proposed habitat enhancements include a tidal channel, subtidal rock reef habitat, eelgrass habitat, and intertidal flat habitat.

The site was identified by Tseil-Waututh Nation as a priority restoration site, and was selected for restoration because of its current relatively low habitat values and input from Indigenous groups. In November 2018, DFO issued VFPA a *Fisheries Act* Authorization for the Centerm Expansion Project (CEP), accepting a portion of the fish habitat created at MMRP as offsetting for CEP. Remaining fish habitat created for the Maplewood Marine Restoration Project is anticipated to be eligible for deposit into the Habitat Bank. VFPA is currently engaging with Tseil-Waututh Nation on this aspect, and intends to submit a joint Project Confirmation document to DFO early in 2019. The Project is in the final design development and permitting phase, with outstanding permits and approvals anticipated to be received in early 2019. Construction on the project is scheduled to commence in summer 2019.

### ***Tsawwassen Eelgrass Project***

The proposed Tsawwassen Eelgrass Project consists of two subtidal sites located on Roberts Bank south of the Tsawwassen Ferry Terminal near Delta, B.C. The sites are bordered to the north by a recreational boating channel and are surrounded by eelgrass meadows to the south and east. The proposed project would result in the conversion of approximately 43,000 m<sup>2</sup> (4.3 ha; 2.6 ha at Site 1 and 1.7 ha at Site 2) of previously dredged low value subtidal areas into higher value eelgrass habitat. Eelgrass bed creation would be accomplished by constructing rock containment berms followed by placement of suitable substrate (sand and silt) and planting of eelgrass. VFPA will continue to advance land tenure approvals in 2019 for this project.

### ***South Arm Jetty Tidal Marsh Project***

The South Arm Jetty Tidal Marsh Project would involve the creation of brackish marsh on the north side of the Steveston North Jetty near Richmond by the mouth of the South Arm of the Fraser River. The project is expected to result in the creation of up to 300,000 m<sup>2</sup> (30 ha) of brackish marsh habitat and 90,000 m<sup>2</sup> (9 ha) of brackish cobble/boulder beach. The site is located on Provincial crown land and land tenure would need to be acquired prior to construction. VFPA submitted an application for land tenure to the Ministry of Forests, Lands, Natural Resource Operations and Rural Development in 2018, and will continue to advance this aspect in 2019.

### ***Westham Island/Canoe Pass Tidal Marsh Project***

The Westham Island/Canoe Pass Tidal Marsh Project would involve the creation of brackish marsh in Canoe Passage in Delta, B.C. along the south shore of Westham Island. The project is expected to result in the creation of approximately 40,000 m<sup>2</sup> (4.0 ha) of brackish marsh habitat. VFPA is anticipated to continue to advance the past (2014) application for land tenure to the Ministry of Forests, Lands, Natural Resource Operations and Rural Development in 2019.

## **Secondary Projects**

### ***McDonald Tidal Marsh Project***

The proposed McDonald Tidal Marsh Project is located on Sea Island, north of Vancouver International Airport and upstream of the mouth of McDonald Slough along the Fraser River North Arm in Richmond, B.C. The McDonald Tidal Marsh Project would involve the conversion of approximately 29,000 m<sup>2</sup> (2.9 ha) of historically impacted upland (foreshore fill area) and subtidal (e.g., barge mooring) areas into high quality fish habitat through the excavation of upland areas and the establishment of brackish marsh. Tidal channels would be installed throughout the tidal marsh and riparian habitat would be enhanced. The site is located on VFPA-owned land; however, access would be required through land owned by Vancouver International Airport and Environment and Climate Change Canada. VFPA is not anticipated to advance this project in 2019.

### ***Point Grey Tidal Marsh Project***

The Point Grey Tidal Marsh Project would result in the establishment of brackish marsh on the eastern portion of the Point Grey Booming Grounds near Vancouver, B.C. along the Fraser River North Arm. The project would result in the creation of up to 411,000 m<sup>2</sup> (41.1 ha) of brackish marsh habitat. The site is located on Provincial crown land and land tenure would need to be acquired prior to construction of the project. VFPA is not anticipated to advance this project in 2019.

### ***Sturgeon Bank Restoration Feasibility Project***

VFPA has been supporting research for the Sturgeon Bank Restoration Feasibility Project to investigate causes for the retreat of the leading edge of the brackish tidal marsh at Sturgeon Bank since 2014. A Feasibility Committee for Sturgeon Bank was formed in 2014 to analyze the extent of marsh degradation, determine habitat restoration potential, describe the natural characteristics of Sturgeon Bank, develop a communication outreach strategy, incorporate traditional knowledge, and utilize a numerical modelling approach to support feasibility assessments. This research continues to be advanced to help support a potential future restoration project at the site, in collaboration with Environment and Climate Change Canada (Canadian Wildlife Service) and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development.

## **Management Issues and Opportunities**

The majority of discussions with DFO in 2018 revolved around development of a new Arrangement, and Indigenous consultation and engagement in relation to the proposed Arrangement. VFPA also met with DFO National staff in October 2018 to discuss key challenges that VFPA has encountered with administration of its Habitat Bank and potential strategies to help address these challenges.

### **Development of a New Arrangement**

As identified under Section 3.9 of the 2012 Agreement, the Agreement may be amended by mutual consent and written agreement between DFO and VFPA. The original Agreement between DFO and VFPA for the operation of the Habitat Bank expired in September 2017. DFO and VFPA mutually agreed to extend the Agreement in 2017 for one year (with the Agreement expiring in September 2018). To provide additional time to facilitate discussions regarding Indigenous engagement on the proposed new Arrangement, this Agreement was



## VANCOUVER FRASER PORT AUTHORITY | 2018 DFO Annual Report

extended again in 2018, with the Agreement extension currently set to expire on March 31, 2019.

The new Arrangement between DFO and VFPA would replace the current Agreement, and existing projects completed under the terms of the current Agreement would be managed pursuant to the terms and conditions of the new Arrangement. The Arrangement would establish revised principles for the continuation and management of the Habitat Bank by:

- Establishing a working relationship between DFO and VFPA based on trust, accountability, and information sharing;
- Establishing a clear understandable Arrangement for managing the Habitat Bank; and
- Increasing certainty in administration of the Habitat Bank.

Several drafts of the proposed Arrangement have been provided by VFPA for review by DFO. The current draft Arrangement (dated August 14, 2018) is currently under review by DFO.

### ***Engagement and Consultation with Indigenous Groups on the Draft Arrangement***

Proponent-led habitat banking was identified as an option for offsetting in the *Fisheries Productivity Investment Policy* (DFO, November 2013). In October 2016, DFO released the *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (the Interim Guide) which provides habitat banking policy guidance to meet national objectives, ensure national consistency, and meet a need for public transparency. The Interim Guide describes best management practices for operating a habitat bank and provides guidance to ensure nationally consistent policy implementation on the management of habitat banks.

Section 4.1 of the Interim Guide recommends engagement of Indigenous and key stakeholder groups:

*"The establishment and management of a proponent-led habitat bank must include the engagement of Indigenous groups and key stakeholders that may be affected by the proponent-led habitat bank's conservation projects and the fisheries benefits they generate. Aboriginal and Treaty rights must be considered in the planning and establishment of a proponent-led habitat bank, and in particular planning the conservation projects and defining the service areas to ensure there are no resulting adverse impacts on Aboriginal or Treaty rights. It is considered good practice to provide feedback on the status of the habitat bank to Indigenous groups and stakeholder groups affected by the proponent-led habitat bank."*

In May 2018, VFPA finalized its *Indigenous Engagement Work Plan for Vancouver Fraser Port Authority's and Fisheries and Oceans Canada's Habitat Bank Arrangement* (the Indigenous Engagement Work Plan), which was accepted for use by DFO.

## VANCOUVER FRASER PORT AUTHORITY | 2018 DFO Annual Report

In accordance with the Indigenous Engagement Work Plan, information packages were submitted in August 2018 to Indigenous groups with asserted traditional territories or treaty lands that intersect with lands and waters managed by VFPA. These packages included descriptions of:

- How habitat banks are used to offset Serious Harm to fisheries;
- How habitat credits are deposited into the Habitat Bank;
- How habitat credits may be withdrawn from the Habitat Bank, and the DFO-led Indigenous consultation process associated with the withdrawal;
- An overview of VFPA's *Aboriginal Consultation and Engagement Process* for proposed HEP projects; and
- Other relevant materials (e.g., a map of existing and proposed HEP projects)

Three formal information sessions with representatives from Indigenous groups, VFPA's HEP, and DFO Regional staff occurred on September 11, 2018 (in the Lower Mainland), October 16, 2018 (on Vancouver Island) and November 29, 2018 (in Chilliwack). The purpose of the sessions was to consult, engage, and gather input from Indigenous groups on the processes VFPA has in place for engagement on HEP projects, as well as to provide background information on DFO's processes as it relates to habitat banking (specifically addressing topics on the requirements for *Fisheries Act* Authorizations, proponent-led habitat banking, and habitat banking arrangements). In addition, one-on-one meetings were offered as requested by Indigenous groups. Following these information sessions and meetings, a response period was provided to Indigenous groups for feedback on the meeting summaries. At conclusion of the engagement period, VFPA prepared a document titled *Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement* which incorporated feedback received from Indigenous groups, and responses from VFPA and DFO. The final document is targeted to be shared with Indigenous groups in February 2019.

### **Key Administrative Challenges**

Many of the key challenges that VFPA is facing during administration of the Habitat Bank stem from DFO policy and practice favouring project-specific offsetting. In particular, challenges associated with the long time period that has been required to implement a new long-term Arrangement with DFO, use of habitat credits, and long-term monitoring, were highlighted during the meeting with DFO National and Regional staff on October 11, 2018.

#### ***Undefined Processes for Establishing an Arrangement***

VFPA's Habitat Bank is a long-term commitment and it requires a long-term Arrangement with DFO. VFPA has been working with DFO since January 2016 to negotiate a long-term Arrangement, as VFPA's current Agreement was for a 5-year trial period. However, DFO does not have defined processes and timelines for establishing a long-term Arrangement, which has resulted in a lengthy process to try to initiate a new Arrangement. This has created significant uncertainty for VFPA regarding investment decisions in habitat banking projects.

VFPA suggests that DFO establish clear processes and timelines for implementing and administering a habitat banking arrangement, to give proponents more clarity on DFO's expectations when trying to establish an arrangement.

### ***Limitation on Habitat Credit Use***

VFPA's current Agreement indicates that habitat used to offset authorized Serious Harm has to be at least "*nominally fully functional*" with a provision for additional confirmatory monitoring included in any Authorization. However, DFO's Interim Guide states that habitat credits must be fully functional and demonstrated to be stable prior to withdrawal, otherwise "the actual productive value... will be determined immediately prior to its proposed application as credit to offset a development project". DFO's recent position creates an impediment for habitat banking as habitat credits will require years to develop whereby credits from a direct offsetting concept would be valued at their full design capacity. Large scale habitat projects typically require 5 to 10 years to design, construct and develop to full ecological function. It is difficult for proponents to predict when they will require the habitat credits for offsetting and the habitat site(s) may not be at full ecological function when they are proposed as an offset.

VFPA suggests that consideration be made for allowing the use of habitat credits, at their full value, from banking sites that are nearing full ecological functionality. Conditions can be included in the associated Authorization for subsequent monitoring to substantiate that the full value of the habitat site has been achieved (e.g., via quantitative monitoring).

### ***Long-Term Monitoring***

Habitat that is constructed for project-specific offsetting (in a conventional Authorization scenario) is typically monitored and maintained for approximately five years (i.e., until the habitat is functioning as intended) at which time the proponent's responsibility ends. Habitat banking sites require monitoring and maintenance up until the withdrawal of habitat credits, which could be for a significantly longer period. For example, VFPA is still conducting monitoring of its Legacy Habitat Banking sites (i.e., Timberland Basin Habitat, Gladstone Park Tidal Marsh, and Riverfront Park Tidal Marsh) which were constructed in the late 1980s and early 1990s.

VFPA suggests that consideration be given to aligning the requirements for the monitoring and maintenance of habitat banking sites, with the requirements for habitat sites constructed as a project-specific measure.

## **Appendix A**

### **Summary of 2018 VFPA and DFO Meetings**

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Appendix A – Summary of 2018 VFPA and DFO Meetings

Meeting Date & Type	VFPA Representatives*	DFO Representatives*	Discussion*
March 7, 2018 Regional Monthly Meeting (No. 44)	Gord Ruffo (VFPA) Charlotte Olson (VFPA) Jemma Scoble (VFPA) (Hemmera)	Byron Nutton (DFO) Loriena Melnick (DFO) Suzanne Thorpe (DFO)	<p><b>Indigenous Consultation on VFPA's Proposed Habitat Bank Arrangement</b></p> <ul style="list-style-type: none"> <li>Discussed DFO's direction with respect to requirements for Indigenous consultation (Re: June 30, 2017 letter from Cheryl Webb)</li> <li>DFO communicated their expectations with respect to requirements for Indigenous consultation and engagement regarding the Habitat Enhancement Program (HEP)</li> <li>DFO acknowledged that representatives/resources would be available to participate in VFPA-led engagement on the draft Arrangement</li> <li><b>Action:</b> DFO to review and confirm that VFPA's proposed Indigenous engagement on the draft Arrangement meets DFO's expectations (targeting confirmation in April 2018)</li> </ul> <p><b>VFPA's New Habitat Bank Arrangement</b></p> <ul style="list-style-type: none"> <li>VFPA requested DFO's feedback on VFPA's draft Arrangement dated September 26, 2017, especially with regard to provision for use of habitat credits and confirmation of VFPA's geographic service area</li> <li><b>Action:</b> If the Arrangement cannot be finalized by September 2018, VFPA requested a suitable extension to the existing VFPA Working Agreement so VFPA can advance habitat projects and investment in HEP (targeting a response by April 2018)</li> <li><b>Action:</b> DFO requested that VFPA review and confirm the description of "geographic service area" per the current draft Arrangement (targeting confirmation by mid-March 2018)</li> <li><b>Action:</b> DFO to send VFPA formal comments on the September 26, 2017 version of the draft Arrangement (targeting submission by mid-March 2018)</li> </ul> <p><b>Schedule Constraints</b></p> <ul style="list-style-type: none"> <li>VFPA indicated that a long-term Arrangement with DFO is a priority for HEP</li> <li>Discussed the current Working Agreement expiry in September 2018</li> <li><b>Action:</b> Prepare the draft Arrangement for Indigenous consultation (targeting end of March 2018)</li> <li><b>Action:</b> Schedule Indigenous consultation on the draft Arrangement (proposed to occur between April and September 2018)</li> </ul> <p><b>VFPA's 2017 Annual Reports</b></p> <ul style="list-style-type: none"> <li>VFPA provided a brief overview of key components of the 2017 Annual Reports</li> <li><b>Action:</b> DFO to provide acknowledgement (in writing) to VFPA of the deposit of New Brighton Park Shoreline Habitat Restoration (NBP) credits into VFPA's Habitat Bank in 2017 (targeting acknowledgement by April 2018)</li> </ul> <p><b>Maplewood Marine Restoration Project (MMRP)</b></p> <ul style="list-style-type: none"> <li>Discussed development of a Project Confirmation Document for MMRP</li> <li><b>Action:</b> VFPA to prepare a Project Confirmation Document for MMRP, and submit to DFO for review and confirmation</li> </ul>
May 25, 2018 Meeting with DFO and Tsiel-Waututh Nation, Regional Monthly Meeting (No. 45)	Jemma Scoble Charlotte Olson Gord Ruffo	Byron Nutton	<p><b>Meeting Objectives and Attendees</b></p> <ul style="list-style-type: none"> <li>VFPA and DFO met with representatives from Tsiel-Waututh Nation (TWN) to discuss habitat banking</li> <li>TWN representatives at the meeting included:</li> </ul> <p><b>Center Expansion Project Collaboration (CEP)</b></p> <ul style="list-style-type: none"> <li>Discussed current status of CEP and the anticipated timeline for a Fisheries Act Authorization for CEP</li> <li>Discussed fieldwork notifications, spill response/piling, and eelgrass donor sites with regard to CEP and MMRP</li> <li><b>Action:</b> TWN to advise VFPA of timing for comments on the CEP Fisheries Act Authorization Information Package</li> </ul> <p><b>Status of New Agreement between DFO and VFPA</b></p> <ul style="list-style-type: none"> <li>Discussed the existing VFPA and DFO Working Agreement and new draft Arrangement, with VFPA/DFO's target date for execution of a new Arrangement shifted to December 2018 to allow for meaningful Indigenous engagement</li> <li>TWN expressed concern over DFO exercising statutory authority, and around potential third party credit transfers from VFPA's Habitat Bank</li> <li>TWN indicated that they want input on habitat creation undertaken by VFPA's HEP, but they do not want to take away management of the bank</li> <li>TWN requested a separate agreement between TWN and VFPA</li> <li><b>Action:</b> TWN to review the DFO habitat banking guidance document/template</li> <li><b>Action:</b> DFO to request an extension (internally) on the existing VFPA and DFO Working Agreement</li> <li><b>Action:</b> TWN has requested to review a shareable VFPA and DFO draft Arrangement when it is available, and to potentially meet again at that time</li> </ul> <p><b>Recap of Recent Discussions between DFO and TWN in February 2018</b></p> <ul style="list-style-type: none"> <li>TWN met with DFO National Staff in Ottawa to discuss a potential tripartite table; however, the current plan is to draft an agreement between VFPA and TWN over the use of VFPA's habitat credits in Burrard Inlet</li> <li>TWN would like to establish a separate agreement (or alternate) with VFPA regarding statutory decisions and joint recommendations for use of VFPA's habitat credits in Burrard Inlet</li> </ul>

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Appendix A – Summary of 2018 VFPA and DFO Meetings

Meeting Date & Type	VFPA Representatives*	DFO Representatives*	Discussion*
June 26, 2018 Regional Monthly Meeting (No. 46)	Gord Ruffo Charlotte Olson Jemma Scoble	Byron Nutton Suzanne Thorpe	<p><b>Status of VFPA and DFO Habitat Bank Arrangement</b></p> <ul style="list-style-type: none"> <li>Discussed the status of the existing Working Agreement extension</li> <li>VFPA provided an overview of their review process</li> <li>VFPA provided an update on the status of the draft "Consultation Annexes" on Indigenous engagement for the new Arrangement</li> <li><b>Action:</b> VFPA to share draft "Consultation Annexes" with DFO, intended to be included with the new Arrangement</li> </ul> <p><b>Preparation of Material for Indigenous Engagement – Information Packages</b></p> <ul style="list-style-type: none"> <li>Reviewed outline of the proposed Indigenous engagement information packages (targeting mid-July 2018),</li> <li>Discussed timelines for finalization of the Indigenous engagement information packages (targeting end of July 2018, with distribution to Indigenous groups targeted for the beginning of August 2018)</li> <li><b>Action:</b> DFO to confirm the planned sharing of DFO's habitat banking guidance document/template as part of the Information Package</li> </ul> <p><b>Planning for Fall Indigenous Engagement</b></p> <ul style="list-style-type: none"> <li>Confirmed a meeting date in August to discuss presentation material at the fall Indigenous engagement meetings</li> <li>Discussed targeted dates for fall Indigenous engagement in September and October 2018</li> <li><b>Action:</b> VFPA to share the Project Overview for NBP with DFO</li> </ul> <p><b>MMRP</b></p> <ul style="list-style-type: none"> <li><b>Action:</b> VFPA to prepare a Project Confirmation Document with proposed productivity gains for MMRP to submit to DFO for review and confirmation (targeted later in 2018, pending CEP FAA progress)</li> </ul> <p><b>VFPA's 2017 Annual Reports</b></p> <ul style="list-style-type: none"> <li><b>Action:</b> DFO to provide acknowledgement (in writing) to VFPA of the deposit of NBP habitat credits into VFPA's Habitat Bank in 2017</li> </ul>
August 22, 2018 Regional Meeting (No. 47)	Gord Ruffo Charlotte Olson Jemma Scoble	Byron Nutton Suzanne Thorpe Shona Smith (DFO)	<p><b>Introductions</b></p> <p><b>Recap of the Indigenous Engagement Plan</b></p> <ul style="list-style-type: none"> <li>Review the Indigenous Engagement Plan</li> <li>Review Information Packages sent to Indigenous groups</li> </ul> <p><b>Planning for Fall Indigenous Engagement</b></p> <ul style="list-style-type: none"> <li>Discussed: Attendees, meeting format, facilitator, presenters, materials, and logistics</li> <li><b>Action:</b> VFPA and DFO to prepare a draft anticipated internal Q&amp;A document and share with each other (targeted for end of August 2018)</li> <li><b>Action:</b> DFO to send VFPA a copy of the DFO presentation for the September 11, 2018 meeting</li> <li><b>Action:</b> VFPA to confirm draft agenda for the September 11, 2018 meeting</li> </ul> <p><b>VFPA and DFO Habitat Bank Arrangement</b></p> <ul style="list-style-type: none"> <li><b>Action:</b> DFO to review the August 14, 2018 draft version of the Arrangement, and respond to VFPA with comments</li> </ul> <p><b>VFPA's 2017 Annual Reports</b></p> <ul style="list-style-type: none"> <li><b>Action:</b> DFO to provide acknowledgement (in writing) to VFPA of the deposit of NBP habitat credits into VFPA's Habitat Bank in 2017</li> </ul>
October 11, 2018 National Meeting	Charlotte Olson Gord Ruffo Scott Northrup Gilles Assler (VFPA)	Byron Nutton Suzanne Thorpe Alwyn Rose (DFO Ottawa)	<p><b>Overview of VFPA's HEP</b></p> <p><b>Project Example – NBP</b></p> <ul style="list-style-type: none"> <li>Background provided on the planning and development of the NBP project</li> <li>Site visit to NBP conducted in the afternoon</li> </ul> <p><b>Video Presentation on VFPA HEP Projects</b></p> <ul style="list-style-type: none"> <li>Video shared to provide information on the location, size, and status of each of VFPA's HEP habitat projects</li> </ul> <p><b>VFPA Challenges with Proponent-Led Habitat Banks</b></p> <ul style="list-style-type: none"> <li>VFPA indicated that they are committed to developing the VFPA Habitat Bank, however they are facing administrative challenges</li> <li>Discussed DFO policy and practice heavily favouring project-specific offsetting</li> <li>Discussed key challenges identified by VFPA with administration of the VFPA Habitat Bank, including: <ul style="list-style-type: none"> <li>Processes and lengthy timelines for establishing an Arrangement for habitat banking (i.e., undefined processes and timelines for establishing a long-term Arrangement for habitat banking with DFO)</li> <li><b>Consideration:</b> Establish clear processes and timelines for implementing and administering an Arrangement</li> <li>Limitation on the use of habitat credits (i.e., habitat credits from habitat banking sites that are nearing their full ecological function, are not assessed at their full ecological value)</li> </ul> </li> </ul>

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## **Appendix B**

### **As-Built Reports (no reports for 2018)**

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## **Appendix C**

### **Credit Transaction Reports (no reports for 2018)**

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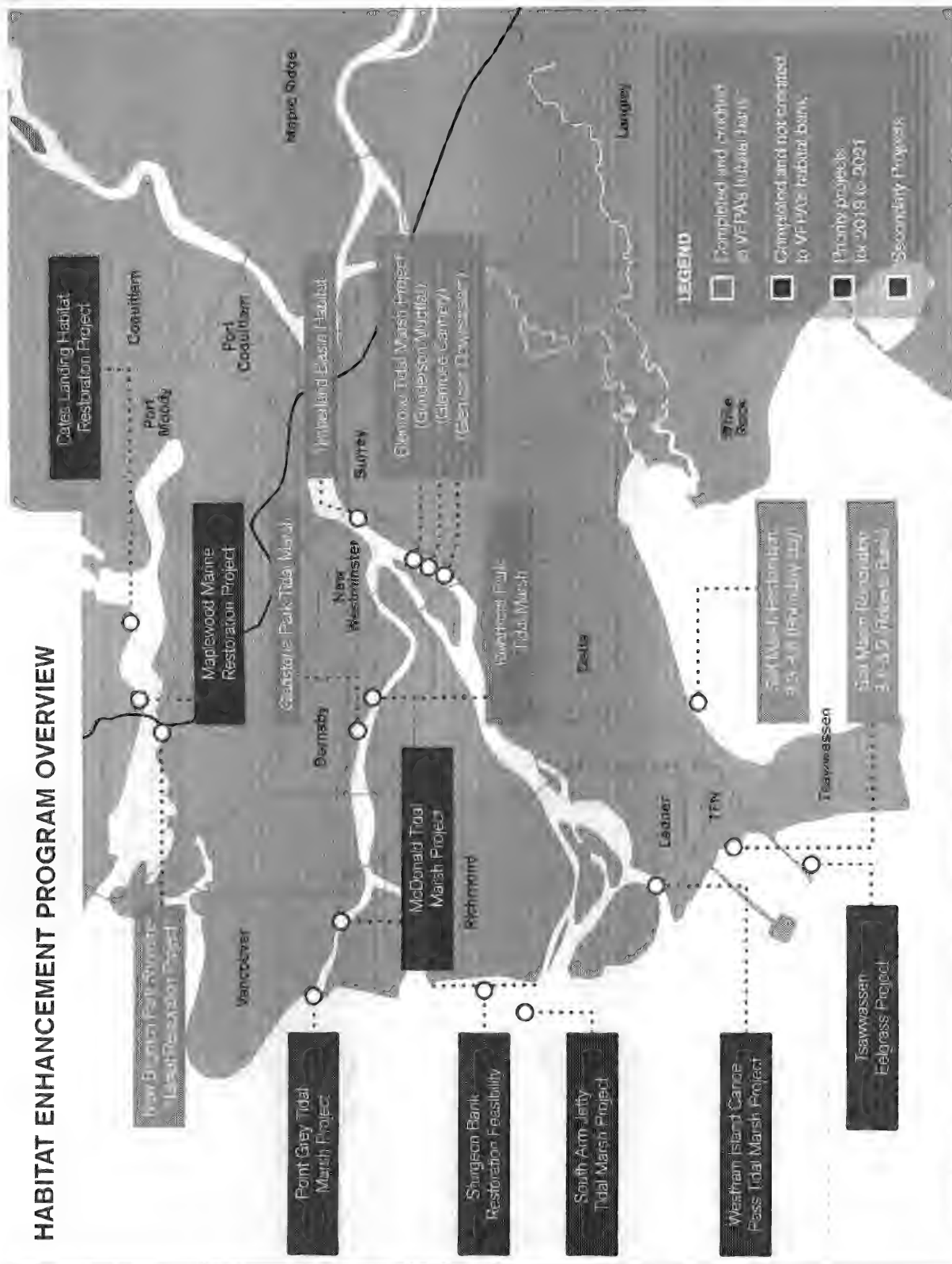
## **Appendix D**

### **Map of Habitat Enhancement Program Project Sites - Completed and Proposed**

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# HABITAT ENHANCEMENT PROGRAM OVERVIEW



## **Appendix E**

### **General Ledger**

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Habitat Enhancement Program - General Ledger

Report Date: December 31, 2018

Definitions

**Portfolio Tracking No.:** The number assigned by VFPA to track sites within Portfolio

**Transaction Date:** The date of completion of the major habitat creation, enhancement and/or restoration works (note that the first day of the month was assumed if the day of the transaction was unknown)

**Site ID:** Location of the habitat creation, restoration and/or enhancement site (for deposits) or location of the impacted habitat (for withdrawals)

**Supporting Documents/Credit Transaction Description:** Description of the supporting document(s) issued and/or signed by DFO in relation to a transaction and/or a short description of the transaction

**Habitat Type:** The type of habitat deposited into or withdrawn from a specific site

**Deposits:** The credits (measured in m<sup>2</sup>) deposited into a specific site

**Withdrawals:** The credits (measured in m<sup>2</sup>) withdrawn from a specific site

**Balance:** The balance of credits (measured in m<sup>2</sup>) remaining within a specific site

Acronyms

**MOU:** Memorandum of Understanding

**NFHC:** North Fraser Harbour Commission

**DFO:** Fisheries and Oceans Canada

**VAA:** Vancouver Airport Authority

**InTransitBC:** InTransitBC Limited Partnership

**VFPA:** Vancouver Fraser Port Authority

Transactions

**Portfolio Tracking No. VAN608-10299H-001 - North Fraser Harbour Habitat Compensation Bank - Habitat Banking Credits**

Transaction Date	Site ID	Supporting Documents/Credit Transaction Description	Habitat Type	Deposits (m <sup>2</sup> )	Withdrawals (m <sup>2</sup> )	Running Balance (m <sup>2</sup> )
01-May 1993	Gladstone Park Tidal Marsh, Fraser River North Arm, Vancouver*	MOU between NFHC and DFO dated October 15, 1993. DFO approved the transfer of credits to the VFPA Habitat Bank in a letter (RE: Transfer of remaining habitat credits from the North Fraser Habitat Bank to the Port Metro Vancouver Habitat Bank) dated April 15, 2013. Refer to the Gladstone Park Tidal Marsh Credit Transaction Report (April 15, 2013) in the 2013 Annual Report for more information.	Brackish Marsh	4,025	0	4,025
01-May 1993	Riverfront Park Tidal Marsh, Fraser River North Arm, Vancouver*	MOU between NFHC and DFO dated October 15, 1993. DFO approved the transfer of credits to the VFPA Habitat Bank in a letter (RE: Transfer of remaining habitat credits from the North Fraser Habitat Bank to the Port Metro Vancouver Habitat Bank) dated April 15, 2013. Refer to the Riverfront Park Tidal Marsh Credit Transaction Report (April 15, 2013) in the 2013 Annual Report for more information.	Brackish Marsh	1,481	0	5,506
01-May 1994	Fraser Foreshore Park Tidal Marsh, Fraser River North Arm, Burnaby*	MOU between NFHC and DFO dated October 15, 1993. DFO approved the transfer of credits to the VFPA Habitat Bank in a letter (RE: Transfer of remaining habitat credits from the North Fraser Habitat Bank to the Port Metro Vancouver Habitat Bank) dated April 15, 2013. Refer to the Fraser Foreshore Park Tidal Marsh Credit Transaction Report (April 15, 2013) in the 2013 Annual Report for more information.	Brackish Marsh	368	0	5,874
01-Oct-1999	Gladstone Park Tidal Marsh, Fraser River North Arm, Vancouver	Credits withdrawn in association with the Airport Connector Project, Fraser River Middle Arm, Richmond (DFO Authorization No. 9819F085 issued to VAA dated 1999). Per the Authorization, habitat credits were withdrawn from the Gladstone Park Tidal Marsh site. Refer to the Gladstone Park Tidal Marsh Credit Transaction Report (April 15, 2013) in the 2013 Annual Report for more information.	Brackish Marsh	0	294	5,580

Habitat Enhancement Program - General Ledger

Transactions						
Transaction Date	Site ID	Supporting Documents/Credit Transaction Description	Habitat Type	Deposits (m <sup>2</sup> )	Withdrawals (m <sup>2</sup> )	Running Balance (m <sup>2</sup> )
01-Sept-2005	Gladstone Park Tidal Marsh, Fraser River North Arm, Vancouver	Credits withdrawn in association with the Moray Bridge Project, Fraser River Middle Arm (DFO Authorization No. 03-HPAC-PA1-000-000131 issued to InTransitBC dated 2005). Habitat credits were not withdrawn from a specific site. For accounting purposes, VFPA has retroactively assigned 550 m <sup>2</sup> of credits to be withdrawn from the Gladstone Park Tidal Marsh site. Refer to the Gladstone Park Tidal Marsh Credit Transaction Report (April 15, 2013) in the 2013 Annual Report for more information.	Brackish Marsh	0	550	5,030
12-Dec-2013	Fraser Foreshore Park Tidal Marsh, Fraser River North Arm, Burnaby	Removal of all Fraser Foreshore Park Tidal Marsh credits from the VFPA Habitat Bank following a site assessment that determined that the site was not functioning as intended. Refer to the Fraser Foreshore Park Tidal Marsh Credit Transaction Report (December 12, 2013) in the 2013 Annual Report for more information.	Brackish Marsh	0	368	4,662
* As of December 31, 2016, 3,181 m <sup>2</sup> of credit remains at Gladstone Park, 1,481 m <sup>2</sup> of credit remains at Riverfront Park and no credits remain at Fraser Foreshore Park as it was removed from the VFPA Habitat Bank						
PORTfolio Tracking No. DEL034-10300H-001 - Salt Marsh Restoration Site 3.1 - Habitat Banking Credits						
Transaction Date	Site ID	Supporting Documents/Credit Transaction Description	Habitat Type	Deposits (m <sup>2</sup> )	Withdrawals (m <sup>2</sup> )	Running Balance (m <sup>2</sup> )
25-Mar-2013	Salt Marsh Restoration Site 3.1, Roberts Bank, Delta	Credit value methodology determined per the Salt Marsh Restoration DFO Project Confirmation document (June 5, 2013). Refer to the As-Built Report for the Roberts Bank Salt Marsh Restoration Site 3.1 (December 20, 2013) and the Salt Marsh Restoration Site 3.1 Credit Transaction Report (December 20, 2013) in the 2013 Annual Report for more information.	Salt Marsh	4,105	0	4,105
Salt Marsh Restoration Site 3.1 (DEL034-10300H-001) Balance						
4,105						
PORTfolio Tracking No. DEL034-10298H-001 - Salt Marsh Restoration Sites 3.3 - 3.5 - Habitat Banking Credits						
Transaction Date	Site ID	Supporting Documents/Credit Transaction Description	Habitat Type	Deposits (m <sup>2</sup> )	Withdrawals (m <sup>2</sup> )	Running Balance (m <sup>2</sup> )
30-Sept-2013	Salt Marsh Restoration Site 3.3, Boundary Bay, Delta	Credit value methodology determined per the Salt Marsh Restoration DFO Project Confirmation document (June 5, 2013). Refer to the As-Built Report for the Boundary Bay Salt Marsh Restoration Sites 3.3 - 3.5 (December 20, 2013) and the Salt Marsh Restoration Site 3.3 Credit Transaction Report (December 20, 2013) in the 2013 Annual Report for more information.	Salt Marsh	16,015	0	16,015
30-Sept-2013	Salt Marsh Restoration Site 3.4, Boundary Bay, Delta	Credit value methodology determined per the Salt Marsh Restoration DFO Project Confirmation document (June 5, 2013). Refer to the As-Built Report for the Boundary Bay Salt Marsh Restoration Sites 3.3 - 3.5 (December 20, 2013) and the Salt Marsh Restoration Site 3.4 Credit Transaction Report (December 20, 2013) in the 2013 Annual Report for more information.	Salt Marsh	8,942	0	24,957
30-Sept-2013	Salt Marsh Restoration Site 3.5, Boundary Bay, Delta	Credit value methodology determined per the Salt Marsh Restoration DFO Project Confirmation document (June 5, 2013). Refer to the As-Built Report for the Boundary Bay Salt Marsh Restoration Sites 3.3 - 3.5 (December 20, 2013) and the Salt Marsh Restoration Site 3.5 Credit Transaction Report (December 20, 2013) in the 2013 Annual Report for more information.	Salt Marsh	31,400	0	56,357
Salt Marsh Restoration Sites 3.3 - 3.5 (DEL034-10298H-001) Balance						
56,357						

Habitat Enhancement Program - General Ledger

Transactions						
PORTfolio Tracking No. DEL034-10346H-001 - Salt Marsh Restoration Site 3.2 - Habitat Banking Credits						
Transaction Date	Site ID	Supporting Documents/Credit Transaction Description	Habitat Type	Deposits (m <sup>2</sup> )	Withdrawals (m <sup>2</sup> )	Running Balance (m <sup>2</sup> )
17-Jan-2014	Salt Marsh Restoration Site 3.2, Roberts Bank, Delta	Credit value methodology determined per the Salt Marsh Restoration DFO Project Confirmation document (June 5, 2013). Habitat areas are reported in the As-Built Report for Roberts Bank Salt Marsh Restoration Site 3.2 (November 6, 2014). Refer to the Salt Marsh Restoration Site 3.2 Credit Transaction Report (January 17, 2014) in the 2014 Annual Report for more information.	Salt Marsh	2,530	0	2,530
Salt Marsh Restoration Site 3.2 (DEL034-10346H-001) Balance						
2,530						
PORTfolio Tracking No. SUR328-10360H-001 - Timberland Basin Habitat - Habitat Banking Credits						
Transaction Date	Site ID	Supporting Documents/Credit Transaction Description	Habitat Type	Deposits (m <sup>2</sup> )	Withdrawals (m <sup>2</sup> )	Running Balance (m <sup>2</sup> )
29-Aug-2014	Timberland Basin Habitat, Fraser River, Surrey	DFO approved the transfer of credits from the former Timberland Basin Habitat Bank to the VFPA Habitat Bank in a letter (RE: Transfer of Credits from Timberland Habitat Bank to Port Metro Vancouver Habitat Bank) dated August 29, 2014. Refer to the Timberland Basin Habitat Credit Transaction Report (Tidal Freshwater Marsh - Creation) (August 29, 2014) in the 2014 Annual Report for more information.	Freshwater Tidal Marsh	1,146	0	1,146
29-Aug-2014	Timberland Basin Habitat, Fraser River, Surrey	DFO approved the transfer of credits from the former Timberland Basin Habitat Bank to the VFPA Habitat Bank in a letter (RE: Transfer of Credits from Timberland Habitat Bank to Port Metro Vancouver Habitat Bank) dated August 29, 2014. Refer to the Timberland Basin Habitat Credit Transaction Report (Tidal Freshwater Mudflat - Creation) (August 29, 2014) in the 2014 Annual Report for more information.	Freshwater Tidal Mudflat	2,777	0	2,777
Timberland Basin Habitat (SUR328-10360H-001) Balance						
3,923						

Habitat Enhancement Program - General Ledger

Transactions						
PORTfolio Tracking No. DEL322-10361H-001 - Glenrose Tidal Marsh - Habitat Banking Credits						
Transaction Date	Site ID	Supporting Documents/Credit Transaction Description	Habitat Type	Deposits (m <sup>2</sup> )	Withdrawals (m <sup>2</sup> )	Running Balance (m <sup>2</sup> )
25-Nov-2014	Glenrose Downstream, Fraser River, Delta	Credit value methodology determined per the Project Confirmation document (November 25, 2014). Refer to the As-Built Report for the Glenrose Tidal Marsh Project (October 31, 2014) and the revised Glenrose Tidal Marsh Project Credit Transaction Report (Glenrose Downstream) (February 10, 2015) in the 2014 Annual Report for more information.	Freshwater Tidal Marsh	2,070	0	2,070
25-Nov-2014	Glenrose Cannery, Fraser River, Delta	Credit value methodology determined per the Project Confirmation document (November 25, 2014). Refer to the As-Built Report for the Glenrose Tidal Marsh Project (October 31, 2014) and the revised Glenrose Tidal Marsh Project Credit Transaction Report (Glenrose Cannery) (February 10, 2015) in the 2014 Annual Report for more information.	Freshwater Tidal Marsh	2,632	0	4,702
25-Nov-2014	Gunderson Mudflat, Fraser River, Delta	Credit value methodology determined per the Project Confirmation document (November 25, 2014). Refer to the As-Built Report for the Glenrose Tidal Marsh Project (October 31, 2014) and the Glenrose Tidal Marsh Project Credit Transaction Report (Gunderson Mudflat) (October 31, 2014) in the 2014 Annual Report for more information.	Freshwater Tidal Marsh	6,076	0	10,778
				Glenrose Tidal Marsh (DEL322-10361H-001) Balance		
				10,778		
PORTfolio Tracking No. VAN048-10299H-001 - New Brighton Park Shoreline Habitat Restoration Site - Habitat Banking Credits						
Transaction Date	Site ID	Supporting Documents/Credit Transaction Description	Habitat Type	Deposits (m <sup>2</sup> )	Withdrawals (m <sup>2</sup> )	Running Balance (m <sup>2</sup> )
31-Jul-2017	New Brighton Park Shoreline Habitat Restoration, Burrard Inlet, Vancouver	Credit value methodology and habitat areas are outlined in the As-Built Report (December 2017). Refer to the New Brighton Park Shoreline Habitat Restoration Project Credit Transaction Report (December 31, 2017) in the 2017 Annual Report for more information. DFO issued a letter to VFPA in December 2018 acknowledging the 2017 habitat credit deposit for New Brighton Park.	Salt Marsh	1,890	0	1,890
			Marine Tidal Mudflat	961	0	961
			Marine Tidal Channel	1,645	0	1,645
			Marine Cobble/Boulder Beach	401	0	401
			Marine Backshore Grass/Herb	1,889	0	1,889
			Marine Backshore Tree/Shrub	3,086	0	3,086
				New Brighton Park Shoreline Habitat Restoration Site (VAN048-10299H-001) Balance		
				9,872		
Total Balance for the VFPA Habitat Bank						92,227

## **Appendix F**

### **2018 Habitat Balance Sheet**

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Habitat Enhancement Program - 2018 Habitat Balance Sheet

Report Date: December 31, 2018

Definitions

**Portfolio Tracking No.:** The number assigned by Vancouver Fraser Port Authority to track sites within Portfolio

**Site ID:** Location of the habitat creation, enhancement and/or restoration site

**Habitat Type and Credits:** The remaining credits at a specific site classified by the type of habitat

**Marine Habitat:** Habitat located in an environment typically exhibiting salinities greater than 18 parts per thousand (ppt)

**Brackish Habitat:** Habitat located in an environment typically exhibiting salinities between 0.5 and 18 ppt

**Freshwater Habitat:** Habitat located in an environment exhibiting salinity salinities below 0.5 ppt

**Salt Marsh:** Vegetated intertidal fish habitat, established in areas of predominantly saltwater influence, typified by salt tolerant emergent plants.

**Marine Tidal Mudflat:** Unvegetated intertidal fish habitat, established in areas of predominantly saltwater influence, typically colonized by saltwater tolerant benthic algal and infaunal invertebrate communities. Tidal saltwater mudflats typically occur in lower energy saltwater areas, where sand, silt, clay and organic matter accumulate, or at stream mouths.

**Marine Tidal Channel:** Fish habitat that conveys saltwater, nutrients, sediment, and biota through intertidal habitats and can provide rearing areas for fish, wildlife, and invertebrates.

**Marine Cobble/Boulder Beach:** Nearshore marine habitat consisting of cobbles and boulders that often support algal and invertebrate species.

**Marine Backshore Grass/Herb:** Marine shoreline habitat, located above and within 30 metres of the Higher High Water Large Tide elevation, consisting of graminoid and herbaceous plants that are tolerant of coastal sea spray (e.g., dune grass (*Leymus mollis*)).

**Marine Backshore Tree/Shrub:** Native tree and shrub habitat, located within 30 metres of the Higher High Water Large Tide elevation, in areas of predominantly saltwater influence.

**Brackish Marsh:** Vegetated intertidal fish habitat, established in areas of saltwater and freshwater influence, typified by moderately salt tolerant emergent plants.

**Freshwater Tidal Marsh:** Vegetated intertidal fish habitat, established in areas of predominantly freshwater influence, typified by freshwater emergent plants.

**Freshwater Tidal Mudflat:** Unvegetated intertidal fish habitat, established in areas of predominantly freshwater influence, typically colonized by freshwater tolerant benthic algal and infaunal invertebrate communities. Tidal freshwater mudflats occur upstream of the salt wedge, typically in lower energy freshwater areas, where sand, silt, clay and organic matter accumulate, or at stream mouths.

**December 31, 2018 Balance:** The balance of credits (measured in m<sup>2</sup>) remaining within a specific site on December 31, 2018

PORTfolio Tracking No.	Site ID	Habitat Type and Credits (m <sup>2</sup> )							
		Marine Habitat			Brackish Habitat		Freshwater Habitat		
		Salt Marsh	Tidal Mudflat	Tidal Channel	Cobble/Boulder Beach	Grass/Herb	Tree/Shrub	Tidal Marsh	Tidal Mudflat
VAN608-10299H-001	Gladstone Park Tidal Marsh, Fraser River North Arm, Vancouver							3,181	
	Riverfront Park Tidal Marsh, Fraser River North Arm, Vancouver							1,481	
DEL034-102260-001	Salt Marsh Restoration Site 3.1, Roberts Bank, Delta	4,105							
DEL034-10298H-001	Salt Marsh Restoration Site 3.3, Boundary Bay, Delta	16,015							
	Salt Marsh Restoration Site 3.4, Boundary Bay, Delta	8,942							
	Salt Marsh Restoration Site 3.5, Boundary Bay, Delta	31,400							
DEL034-10346H-001	Salt Marsh Restoration Site 3.2, Roberts Bank, Delta	2,530							
SUR328-10360H-001	Timberland Basin Habitat, Fraser River, Surrey								
	Glenrose Downstream, Fraser River, Delta							1,146	2,111
DEL322-10361H-001	Glenrose Cannery, Fraser River, Delta							2,070	
	Gunderson Mudflat, Fraser River, Delta							2,632	
								6,076	
VAN048-10299H-001	New Brighton Park Shoreline Habitat Restoration, Burrard Inlet, Vancouver	1,890	961	1,645	401	1,889	3,086		
	December 31, 2018 Balance By Habitat Type	64,882	961	1,645	401	1,889	3,086	4,662	2,777
	December 31, 2018 Total Balance for the VFPA Habitat Bank	92,227							

**From:** Lawrie, Kirsten  
**To:** Nutton, Byron  
**Cc:** Murdoch, Sarah; MacKenzie, Julia  
**Subject:** RE: renewal of VFPA Habitat Bank Arrangement  
**Date:** 2019-February-18 1:12:56 PM

---

Hi Byron,

My apologies for not being able to help you out more regarding this request. At this point we unfortunately do not have someone who can review your agreement but we are working on re-building this capacity for future requests.

Please do not hesitate to contact me should you have any questions or concerns.

All the best,

**Gaby Good for Kirsten Lawrie**

Executive Assistant to Sarah Murdoch, Policy and Economic Analysis/ Assistant exécutif à Sarah Murdoch, Politique et analyse économique  
Fisheries and Oceans Canada/Pêches et Océans Canada  
[kirsten.lawrie@dfo-mpo.gc.ca](mailto:kirsten.lawrie@dfo-mpo.gc.ca) | 604-666-0385

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-15-19 3:56 PM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Bank Arrangement  
**Importance:** High

Hi again Gabby,

Thanks for chatting with me just now.

As I mentioned, I am under quite a bit of pressure to advise my director whether or not there is a formal regional review process that needs to be undertaken before we can move the agreement forward for sign-off.

Again, we are not looking for any help or even requesting that a broader review be undertaken, we just want to be certain that we are not skipping a step if there is a requirement to do such a review.

Thanks again for your time, and I look forward to hearing from you on Monday.

Cheers,

Byron

**From:** Nutton, Byron

**Sent:** 2019–February-13 3:43 PM

**To:** Lawrie, Kirsten <[Kirsten.Lawrie@dfo-mpo.gc.ca](mailto:Kirsten.Lawrie@dfo-mpo.gc.ca)>

**Subject:** FW: renewal of VFPA Habitat Bank Arrangement

**Importance:** High

Hi Gabby (for Kirsten),

As discussed, this is in follow-up to the request from Jason Hwang to Policy (via Kirsten) a couple of weeks ago regarding Fisheries Protection Program (FPP) finalizing the renewal of an existing Habitat Banking arrangement with Vancouver Fraser Port Authority (VFPA). That initial request was forwarded by Kirsten to a couple folks in Finance and Business Management, but it appears that was based on a mis-understanding as both of those people have confirmed they have no “interest” (for lack of a better word) in the issue, so please see the following additional detail/clarification.

This began recently with a request from Brad Fanos (Director, FPP) during his review of the nearly final draft arrangement, on which we have been negotiating with VFPA and engaging with Indigenous groups over that last couple years. According to Brad, at some point Policy was managing a regional process for vetting agreements to confirm the legislative and mandate authorities, and linkages with other sectors and programs. Brad asked that Jason enquire with Policy if this process was still in place, which he did. As mentioned above, based on the subsequent e-mail exchanges, it appears the request was mis-understood/directed. Perhaps the word “banking” was taken a bit out of context, explaining why it was forwarded to finance/business management?

A habitat banking arrangement relates to habitat offsetting requirements when FPP issues an Authorization to a developer to allow the destruction of fish habitat. Basically, the developer is required to replace the habitat that is destroyed with new or improved habitat. Typically a developer will negotiate the offsetting plan at the time they are requesting an Authorization and then build both their development and the offsetting at the same time. In contrast, a habitat banking arrangement allows a developer to build the offsetting habitat in advance, and then later propose to use the “habitat credits” in the bank to meet offsetting requirements of some future potential Authorization. It is all very much contained within FPP operations.

At this point we simply want to be certain that we are going through any broader regional vetting process that Policy is managing (if such a thing exists) before we move it up the line for approval.

I hope this clarifies the issue and the request and I look forward to your response.

As I mentioned on the phone I do have some time constraints, so please don't hesitate to call me if you need anything further.

Thanks for your time,

Byron

*Byron Nutton, RPBio*



**A/Team Lead | Chef d'équipe Intérimaire**  
**Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices**  
**Fisheries Protection Program | Programme de protection des pêches**  
**Fisheries and Oceans Canada | Pêches et Océans Canada**  
**Pacific Region | Région du Pacifique**

**250-618-4268**

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**Hwang, Jason**

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**From:** Nutton, Byron  
**Sent:** February-18-19 7:51 AM  
**To:** Hwang, Jason  
**Subject:** VFPA Habitat bank - 'DRAFT BN  
**Attachments:** 2019-02-13 VFPA proposed changes to Habitat Bank Arrangement.docx; 2019-02-18\_VFPA\_HBA\_BN\_for\_Decision\_DRAFT.docx

**Importance:** High

Hey Jason,

Please see attached:

- DRAFT BN for RD sign-off. Some work still needed, but I would appreciate your feedback on the content overall – particularly the type of information I should be including in “Strategic considerations”
- DRAFT Arrangement – latest draft, just received on Thursday – Suzanne and I will be reviewing and discussing in the next couple days prior to our regularly scheduled bi-weekly call with VFPA on Thursday.

I still have a couple actions outstanding:

- Final follow-up on any additional Indigenous concerns – tomorrow when I’m in the office.
- Final follow-up with Policy on regional review process – will watch for something from them on my BB today.

Cheers,

*Byron Nutton, RPBio*

*A/Team Lead | Chef d'équipe Intérimaire*

*Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices*

*Fisheries Protection Program | Programme de protection des pêches*

*Fisheries and Oceans Canada | Pêches et Océans Canada*

*Pacific Region | Région du Pacifique*

250-618-4268

Draft: February 13, 2019

**Habitat Bank Arrangement:**

**PORT OF VANCOUVER HABITAT BANK**

Between

**VANCOUVER FRASER PORT AUTHORITY**

AND

**HER MAJESTY THE QUEEN IN RIGHT OF CANADA**, as represented by the Minister of  
Fisheries and Oceans on behalf of Fisheries and Oceans Canada (“DFO”)

●xxxxxx, 2019

**PATH Number: [INSERT PATH NUMBER]**

Draft: February 13, 2019

## 1. INTRODUCTION

This document sets out the principles of the mutual understanding between **Vancouver Fraser Port Authority (“VFPA”)** and Fisheries and Oceans Canada (“DFO”) (hereafter referred to as “the Participants”) for the **Port of Vancouver Habitat Bank (“Habitat Bank”)**.

### WHEREAS:

- a. Fisheries and Oceans Canada (DFO) is responsible for the administration of the *Fisheries Act*, more specifically the fisheries protection provisions including sections 6, 20, 21, 35, 37, and 38 related to the conservation and protection of Canada's marine and freshwater fisheries resources and their habitats from the impact of human activities. The purpose of the fisheries protection provisions, as set out in section 6.1 of the *Fisheries Act*, is to provide for the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries;
- b. DFO is responsible for the administration of the *Species at Risk Act* (“SARA”) with respect to aquatic species other than those individuals in or on federal lands administered by the Parks Canada Agency and, in that capacity, the Minister of Fisheries and Oceans has powers and duties with respect to protecting aquatic species listed under that Act and providing for their recovery;
- c. The Fisheries Protection Policy Statement’s goal is to promote compliance with the *Fisheries Act* in order to contribute to the purpose set out in section 6.1 of the *Fisheries Act*;
- d. This Arrangement does not commit DFO to the authorization of any future work, undertaking or activity requiring an authorization under paragraph 35(2)(b) of the *Fisheries Act*, or permit any future project requiring a permit under sections 73 and 74 of the *Species at Risk Act*. All future projects will be reviewed on their own merit and a decision on whether to authorize or permit will be made independent of the existence of a habitat bank arrangement. This Arrangement, and any related communications between DFO and VFPA do not constitute a representation or commitment of any kind regarding authorization of any future projects by DFO. This Arrangement, and any related communications, moreover does not constitute a commitment that any habitat credits that may be issued will be acceptable in the context of future applications for *Fisheries Act* authorizations or SARA permits.
- e. VFPA is a port authority established by the Government of Canada pursuant to the *Canada Marine Act* and is accountable to the federal Minister of Transport. VFPA has a mandate to facilitate Canada’s trade objectives, ensuring goods are moved safely, while protecting the environment and considering local communities. In fulfilling the mandate, VFPA carries out a variety of duties, including infrastructure development to support growth and efficient operations. The Habitat Bank can support such infrastructure development when habitat credits are acceptable in the context of future *Fisheries Act* authorizations or SARA permits.

Draft: February 13, 2019

- f. The Participants entered into a Working Agreement dated July 31, 2012 (“Working Agreement”) relating to the procedures for development and operation of a VFPA-led habitat bank for a five (5) year trial period which was extended by the Participants to March 31, 2019;
- g. VFPA has undertaken several habitat creation and enhancement projects in consultation with DFO pursuant to the Working Agreement, which are included in Annex E (“Existing Projects”); and
- h. This Arrangement will replace the Working Agreement and the Existing Projects will be managed pursuant to this Arrangement.

**THEREFORE**, the Participants agree to the following arrangement (“Arrangement”).

## **2. PURPOSE**

To support VFPA in fulfilling its mandate (referred to in paragraph e above) by facilitating infrastructure development when habitat credits from the Habitat Bank can be applied to meet future offsetting requirements for such development.

To replace the Working Agreement with this Arrangement and to establish revised principles for the continuation and management of the Habitat Bank by:

- establishing a working relationship between the Participants based on trust, accountability and information sharing;
- establishing a clear understandable Arrangement for managing the Habitat Bank; and
- increasing certainty in the administration of the Habitat Bank.

## **3. OTHER GENERAL INFORMATION**

The activities carried out under this Arrangement will be consistent with:

- *Fisheries Protection Policy Statement* (2013);
- *Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting* (2013);
- *Interim Fisheries Protection Program’s Guide to Proponent-led Habitat Banking* (October, 2016) (“Guide”);
- any relevant Species at Risk Recovery Strategies and management considerations; and
- any relevant Fisheries Management Objectives.

Draft: February 13, 2019

#### **4. SCOPE**

The scope of this Arrangement is limited to the continuation and administration of the Habitat Bank described in Annex A, and including Habitat Banking Projects and the Existing Projects (described in Annex E). For the purposes of this Arrangement, a “Habitat Banking Project” shall mean a conservation project proposed in accordance with Annex B.

#### **5. ROLES AND RESPONSIBILITIES**

The roles and responsibilities of the VFPA are:

- Jointly managing the performance of the Arrangement with DFO;
- Identifying, designing, constructing, monitoring, maintaining, and protecting Habitat Banking Project sites;
- Meeting all other applicable federal, territorial, provincial and municipal requirements that apply to Habitat Banking Projects;
- Reporting on performance of Habitat Banking Projects;
- Accurately maintaining a copy of the habitat credit ledger; and
- Preparing and submitting Progress Reports for the Arrangement.

The roles and responsibilities of DFO are:

- Jointly managing the performance of the Arrangement with VFPA;
- Reviewing, providing advice and confirming Habitat Banking Project proposals;
- Reviewing Progress Reports, validating habitat credit balances in the habitat credit ledger, and processing habitat credit ledger transactions;
- Verifying the reported results of Habitat Banking Project performance in the Progress Reports;
- When appropriate, carrying out direct monitoring (i.e., a site visit to gather and analyse samples or information in order to directly verify compliance and effectiveness) and/or carrying out indirect monitoring (i.e., an assessment of information provided in Progress Reports to verify compliance and effectiveness) of Habitat Banking Project sites; and
- Reviewing and processing Progress Reports of the Arrangement.

The Participants shall fulfill their responsibilities under this Arrangement in accordance with the provisions of federal, provincial and territorial laws and regulations that govern their activities. Should a Participant not be able to perform a function under this Arrangement, the affected Participant will immediately contact the other signatories of this Arrangement so that early resolution can be reached.

Draft: February 13, 2019

## **6. MANAGEMENT PROVISIONS**

This Arrangement establishes the following management provisions for the administration of the Habitat Bank:

- The accountability lies with the office of signatories of the Arrangement: Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.
- The day to day administration of the Arrangement will be carried out by: Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region.

## **7. ADMINISTRATION OF THE HABITAT BANK ARRANGEMENT**

- Specific details related to the principles of the administration and operation of the Habitat Bank are included in Annex A;
- Habitat Banking Projects that are proposed for development are to be submitted for review and confirmation by DFO using the “Project Confirmation” template set out in Annex B;
- Habitat credits held within the Habitat Bank shall be tracked using the “Habitat Credit Ledger” template and frequency set out in and described in Annex C;
- Progress Reports shall be prepared and submitted annually in accordance with the requirements of Annex D;
- Existing Projects that were either constructed or proposed for construction under the terms of the Working Agreement are identified in Annex E; and
- Indigenous consultation and engagement related to the use of habitat credits is described in Annex F.

## **8. SHARING OF INFORMATION**

While this Arrangement is in effect and at all times thereafter, each of DFO and VFPA and any officers, employees or agents of each of them shall treat all information, data, documents, reports and materials acquired or to which access have been given in the course of, or incidental to, the performance of this Arrangement as confidential, subject to the federal *Access to Information Act* and the *Privacy Act*. With the exception of the Arrangement, the annexes to the Arrangement and annual Progress Reports, which VFPA may disclose from time to time, the Participants shall not disclose or permit to be disclosed such information, data, documents, reports and materials, unless:

- the Participants agree to the disclosure;
- the disclosure is part of the application and review process of VFPA’s Project and Environmental Review for a proposed Habitat Banking Project, which would include disclosure of project-specific information, engagement information for

Draft: February 13, 2019

- public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of the application and review process by DFO for a proposed development project that would utilize habitat banking credits as offsetting, which would include disclosure of project-specific information, engagement information for public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of an application and review process of other regulatory agencies (such as Environment and Climate Change Canada for Disposal at Sea permit or exemption) for a proposed Habitat Banking Project, which would include disclosure only as required by such agencies;
- the disclosure relates to consultation and engagement with Indigenous groups as part of the Indigenous Consultation and Engagement Process set out in Annex G;
- the disclosure is to a third party as part of the Habitat Bank Administration as described in Annex A;
- the disclosure is required by law;
- the information was obtained from the public; or
- the information is available to the public.

## **9. CONSULTATION AND ENGAGEMENT**

The Participants will collaborate on an approach to meaningfully engage and consult with Indigenous groups having regard to the process being undertaken by VFPA's Habitat Enhancement Program for the development of Habitat Banking Projects and the involvement of Indigenous groups that is described in Annex G.

## **10. DIFFERENCES IN INTERPRETATION AND APPLICATION**

The Participants will endeavor to resolve issues regarding the implementation of this Arrangement in a timely manner using mechanisms available to the Participants. Where an issue remains unresolved, the pre-eminent jurisdiction responsible for the matter under consideration will make the final determination and seek concurrence from Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.

## **11. PROGRESS REPORTS**

The VFPA will prepare progress reports using the form described in Annex D ("Progress Report") on the achievements and challenges encountered during the reporting period of this Arrangement as it relates to the purposes identified in section 2 of this Arrangement.

The Progress Report should be submitted within ninety (90) calendar days from the conclusion of each year. A year will be considered to run from January 1 to December 31.



The Progress Report will be submitted to the Office of signatories of the Arrangement, Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region, for their concurrence.

All Progress Reports will conform to the requirements set out in Annex D.

## **12. REVIEW**

At the end of each five (5) year period during which this Arrangement is in effect, the Regional Director, Ecosystems Management, DFO Pacific Region, may establish a review team consisting of Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region, or an appropriately qualified and mutually agreed to third party to review the effectiveness of activities under this Arrangement. This review team will report to the Regional Director, Ecosystems Management, DFO Pacific Region, within six (6) months of being established.

## **13. AMENDMENT**

The Arrangement may be amended at any time in writing and by mutual consent of the Participants. An amendment will be confirmed by an exchange of letters, signed by the Participants, setting out the amendment and its effective date.

## **14. FINANCIAL ARRANGEMENT**

This Arrangement will not impose any additional financial responsibilities on the Participants, except that each Participant will be responsible for the staff and funding costs it incurs in its own interests, related to the support of the Arrangement.

## **15. DURATION, WITHDRAWAL AND TERMINATION**

This Arrangement is in effect from the date first written above for a period of fifteen (15) years. VFPA can request renewal of the Arrangement for an additional defined term (of no less than five (5) years) by providing one year's written notice to the other Participant. If this Arrangement is not renewed at the expiration of the term or a renewal, and provided that VFPA is not in breach of this Arrangement, the Participants will continue to apply the terms of this Arrangement to all Habitat Banking Projects that are either deposited in the Habitat Bank or have been confirmed by DFO in accordance with Annex B.

## **16. LEGAL DISCLAIMER**

This Arrangement is an expression of the mutual intentions of the Participants and is not legally binding or enforceable against them.

Draft: February 13, 2019

## 17. NOTICE

All notices to be given under this Arrangement shall be in writing and shall be sent by prepaid registered mail or electronic transmission addressed to the Party entitled to receive the same, or delivered to such party as follows:

- if to VFPA:

Vancouver Fraser Port Authority (VFPA)  
100 The Pointe  
999 Canada Place  
Vancouver, British Columbia  
V6C 3T4

Attention: Director, Container Terminal Construction  
E-mail:

with a copy to:

Attention: Director, Legal Services  
E-mail:

- if to DFO:

Fisheries and Oceans Canada (DFO)  
Pacific Region, Ecosystems Management Branch  
Suite 200 – 401 Burrard Street  
Vancouver, BC  
V6C 3S4

Attention: Regional Director  
E-mail:

## 18. GENERAL

VFPA is entering into this Arrangement on its own behalf and not as agent of Her Majesty in Right of Canada.

Draft: February 13, 2019

## EFFECTIVE DATE AND SIGNATURE

This Arrangement has been signed by the Regional Director of DFO Pacific Region of Fisheries and Oceans on behalf of Her Majesty the Queen in Right of Canada and by the VFPA on the dates noted below.

SIGNED IN THE PRESENCE OF:

FOR HER MAJESTY THE QUEEN IN RIGHT OF CANADA

\_\_\_\_\_  
Cheryl Webb  
Regional Director  
Ecosystems Management  
DFO Pacific Region

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

FOR VANCOUVER FRASER PORT AUTHORITY

\_\_\_\_\_  
Robin Silvester  
President and CEO

\_\_\_\_\_  
Witness (as to both)

\_\_\_\_\_  
Mark Gustafson  
Corporate Secretary

\_\_\_\_\_  
Date

This Arrangement comes into effect on the date that both Participants have signed above.

Draft: February 13, 2019

## **ANNEX A**

### **HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK**

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## HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK

[illegible]

Draft: February 13, 2019

	<p>(a) <u>Need</u>: Locations characterized by low productive capacity for species and stocks of interest or species at risk will be considered as a priority for the Habitat Bank. The intent is to develop or improve habitat capacity in the Service Area where habitat is needed and in support of applicable DFO policies.</p> <p>(b) <u>Habitat Productivity</u>: Emphasis will be placed on creation of high value habitat types that support a large number of ecological services and species functions (e.g. eelgrass beds and low marshes). The value of productivity will be assessed in the context of “need” (see (a) above).</p> <p>(c) <u>Site location</u>: Sites for the Habitat Bank will be selected based on their proximity to potential development areas with significant or rare ecological habitats or where onsite habitat compensation opportunities may be limited.</p> <p>(d) <u>Feasibility and cost</u>: Coastal zone processes, river hydraulics biological productivity and ecological functioning are amongst the factors that will be used to determine the feasibility of habitat creation. In some areas it may not be possible to achieve stable self-functioning habitat due to ongoing influences of physical processes. Further, some habitat creation options may be possible but only at extreme high cost. Consideration may be given if these habitat types are critical for endangered or threatened species and the habitat credit applied to the Habitat Bank recognizes the increased cost of development.</p> <p>Through regular liaison meetings between DFO and VFPA representatives, potential Habitat Banking Projects are identified and discussed.</p> <p>DFO’s confirmation of the appropriateness of a proposed Habitat Banking Project for inclusion in the Habitat Bank is achieved through submitting the project for review and confirmation by DFO using the “Project Confirmation” template set out in Annex B.</p> <p><u>Habitat Credits</u>:</p> <p>Habitat credit valuation will be established specifically for each Habitat Banking Project. This valuation will include the unit of measure and the value of the credits to be deposited in the Habitat Bank. A description of the approach and the analysis performed will be included in the preparation of the “Project Confirmation” using the template set out in Annex B.</p> <p>Habitat Banking Projects will be recorded as a deposit into the Habitat Bank on the Habitat Credit Ledger upon completion of construction of the Habitat Banking Project using the template set out in Annex C.</p>
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Draft: February 13, 2019

	<p>The actual productive value of a particular Habitat Banking Project will be determined immediately prior to its proposed use as credit to offset a development project.</p> <p>VFPA shall, either through ownership, lease, licence or other agreement, ensure that a Habitat Banking Project site is protected at least until the withdrawal of the habitat credits from the Bank that are associated with the Habitat Banking Project site.</p> <p><u>Third Parties:</u></p> <p>VFPA may develop Habitat Banking Projects for inclusion in the Habitat Bank in collaboration with third parties. Once included in the Habitat Bank, such Habitat Banking Projects will be treated in the same manner as other Habitat Banking Projects that have been placed into the Habitat Bank.</p> <p>VFPA may enter into agreements with third parties to allow withdrawal of habitat credits, as defined by this Arrangement, when such an agreement facilitates development activities that support VFPA in fulfilling its mandate.</p>
<b>Bank Establishment Date</b>	<p>July 31, 2012 for a five (5) year trial period under the terms of the Working Agreement, which was executed on September 10, 2012, and which was extended by the Participants to March 31, 2019, and which was replaced by this Arrangement for a term of fifteen (15) years from the date this Arrangement comes into effect.</p>

Draft: February 13, 2019



## **ANNEX B**

### **FORM OF PROJECT CONFIRMATION**

The following document template (titled Project Confirmation) will be used to identify and confirm that a proposed Habitat Banking Project is appropriate and confirmed for development and deposit in the Habitat Bank.

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 <b>PORT of vancouver</b> Habitat Enhancement Program	 <b>Fisheries and Oceans Canada</b> <b>Pêches et Océans Canada</b> <b><u>Project Confirmation</u></b>
<b>PROJECT NAME:</b>	

---

### Terminology used:

- “**Arrangement**” refers to the arrangement between Fisheries and Oceans Canada and Vancouver Fraser Port Authority for the management and administration of the Vancouver Fraser Port Authority Habitat Bank
- “**DFO**” refers to Fisheries and Oceans Canada
- “**FPIP**” refers to *Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting (2013)*
- “**VFPA**” refers to Vancouver Fraser Port Authority
- “**Project**” refers to the proposed \_\_\_\_\_
- “**QEP**” refers to a Qualified Environmental Professional

---

### Preamble:

In accordance with the Arrangement, this Project Confirmation will be used to confirm that:

- VFPA consulted and negotiated with DFO on the suitability of the above-referenced Project for habitat banking purposes.
- DFO agrees, in principle, that the above-referenced Project would be acceptable as fish habitat as identified herein.
- DFO agrees that the identified type of fish habitat and the approximate quantity of fish habitat would be suitable for habitat banking.
- The Project meets the terms of the Arrangement with regard to need, fish habitat, productivity, site location, feasibility/cost, and ownership/tenure.
- DFO acknowledges that VFPA has developed the project concept and will move to final design as identified in the attached drawings.

*This Project Confirmation is used to support the conditions and requirements of the Arrangement and does not alter or modify the Arrangement in any manner. This Project Confirmation will also be used to confirm that the Project, if constructed as proposed, meets the objectives of the FPIP. An assisted assessment has determined that a DFO regulatory review pursuant to the Fisheries Act is not required for the Project. This assessment was conducted by a QEP in accordance with guidance from DFO’s Projects Near Water web site and DFO’s “Science Advice for Managing Risk and Uncertainty in Operational Decisions of the Fisheries Protection Program” (2014). As would be expected for a viable habitat enhancement opportunity, this assessment concluded that the Project will not result in Serious Harm to fish that contribute to commercial, recreational or Aboriginal (CRA) fisheries.*

*As the Project proceeds, VFPA will maintain responsibility to ensure that the Project has undergone appropriate reviews and assessments, including those mandated by applicable environmental assessment legislation (e.g., Species at Risk Act, if applicable) and any other VFPA-mandated reviews and assessments.*

---

<b>Project Overview:</b>	
<ul style="list-style-type: none"> <li><i>Description of the proposed project and how the proposed project will result in the creation of fish habitat that will provide long-term benefits for targeted species of fish such as salmon, aquatic species at risk or other species that may utilize the project area.</i></li> <li><i>Description and valuation of the ecological functions that the proposed project will include.</i></li> <li><i>Brief description of the proposed construction activities, including how they will be undertaken to avoid and mitigate any impacts to fish and fish habitat.</i></li> <li><i>Brief description of the proposed timing for project completion, including post-construction monitoring.</i></li> </ul>	
Water feature name:	
<b>Location of Works</b>	
Regional district/ land use authority:	
City/municipality:	
Lat./Long.	
Property ownership:	
<b>Description of Pre-Construction Values</b>	
<ul style="list-style-type: none"> <li><i>Description of pre-construction habitat values and conditions, including biophysical attributes</i></li> <li><i>Description of pre-construction use of the area, including site history as appropriate</i></li> </ul>	
<b>Description of Proposed Activities</b>	
<ul style="list-style-type: none"> <li><i>Detailed description of construction activities and design approach</i></li> <li><i>Includes attachment of design drawings, and proposed habitat area for construction</i></li> <li><i>Description of construction methodology and detailed mitigation measures</i></li> </ul>	
Overall work schedule:	
Least risk work window:	
<b>Potential Habitat Gains and Anticipated Affected Areas</b>	

Draft: February 13, 2019

- *Description of habitat gains, and anticipated affected habitat, table format*

Habitat Type	Potential Habitat Gain (m <sup>2</sup> )	Anticipated Affected Habitat (m <sup>2</sup> )	Comments
X Habitat Type			
<b>Habitat Gains and Affected Habitat</b>			

### Fish Productivity Investment Policy Considerations

- *Description and high-level summary of how the proposed project is expected to comply with FPIP objectives, based on project characteristics, ecology of relevant fisheries species, fisheries management objectives, and any local restoration priorities.*
- *This includes a review of readily available online information including DFO fisheries management plans and other documents as required*
- *Description and rationale for how the proposed project meets the following 4 Principles of the FPIP:*
  - **Principle 1:** *Offsetting measures must support fisheries management objectives or local restoration priorities.*
    - *Rationale:*
  - **Principle 2:** *Benefits from offsetting measures must balance Project impacts.*
    - *Rationale:*
  - **Principle 3:** *Offsetting measures must provide additional benefits to the fishery.*
    - *Rationale:*
  - **Principle 4:** *Offsetting measures must generate self-sustaining benefits over the long-term.*
    - *Rationale:*

### Post Construction Monitoring Plan

- *An as-built survey will be provided to document and confirm the size of the created habitat, following construction.*
- *VFPA will ensure that post-construction monitoring is undertaken in accordance with standard DFO requirements to confirm that created fish habitats are functioning as intended.*
- *A Post-Construction Monitoring Plan for the Habitat Enhancement Program has been created to outline monitoring requirements for habitat banking project sites.*
- *Monitoring will include assessments of site stability, proper physical function, planting success, and achievement of the desired biological objectives.*
- *VFPA to provide an estimate of predicted time for the vegetation at the site to become well established*



Draft: February 13, 2019

## **ANNEX C**

### **HABITAT CREDIT LEDGER**

The following template shall be used to record and track the credits associated with each Habitat Banking Project that has been deposited in the Habitat Bank. The completed Habitat Credit Ledger will be submitted to DFO at the following frequency:

- with each Annual Report; and
- following a transaction in the Habitat Bank (withdrawal or deposit of credits).

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Draft: February 13, 2019

## **ANNEX D**

### **FORM OF PROGRESS REPORTS**

The following reports will be used to document and communicate the status of the Habitat Bank on an annual basis:

- Annual Report for VFPA's Habitat Bank; and
- Annual Habitat Monitoring Report for VFPA's Habitat Bank.

Each report will be submitted to DFO on annual basis and shall include the detail as provided in the following Outline of Content.

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Draft: February 13, 2019

<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<b><u>SECTION</u></b>	<b><u>CONTENT</u></b>
<b>1. Table of Contents</b>	
<b>2. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>3. Executive Summary</b>	<ul style="list-style-type: none"> <li>• Identification of purpose of Annual Report</li> <li>• Statement of commitment between Participants for a working relationship built on trust, accountability and information sharing</li> <li>• Overview of annual transactions and current credits</li> </ul>
<b>4. Introduction</b>	<ul style="list-style-type: none"> <li>• Background on the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>5. Administration of the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Tracking processes and responsibilities</li> <li>• Activities started/completed in Reporting Period</li> <li>• Annual Review</li> <li>• VFPA and DFO Liaison Activities</li> <li>• Achievements in Reporting Period</li> </ul>
<b>6. Credits in the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Summary of the credits in the Habitat Bank and the transaction that were performed in the reporting year</li> </ul>
<b>7. General Ledger</b>	<ul style="list-style-type: none"> <li>• Overview of the General Ledger</li> </ul>
<b>8. Habitat Balance Sheet</b>	<ul style="list-style-type: none"> <li>• Overview of the Habitat Balance Sheet</li> </ul>
<b>9. Anticipated Program for 20XX [Next Year]</b>	<ul style="list-style-type: none"> <li>• Projects Currently under Construction</li> <li>• Priority Projects for 20XX</li> </ul>
<b>10. Management Issues and Opportunities</b>	<ul style="list-style-type: none"> <li>• Challenges and issues encountered</li> <li>• Obstacles</li> <li>• Potential remedial measures for implementation next year</li> </ul>
<b>11. Indigenous Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of Indigenous engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>



Draft: February 13, 2019

<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>12. Public and Key Stakeholder Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of public and key stakeholder engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Summary of VFPA and DFO Meetings in the Reporting Year
Appendix B	As-Built Reports
Appendix C	Credit Transaction Reports
Appendix D	Map of Sites in the Habitat Bank
Appendix E	General Ledger
Appendix F	Habitat Balance Sheet
Appendix G	Map of Sites Proposed for Next Year

Draft: February 13, 2019

<b><u>ANNUAL HABITAT MONITORING REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>1. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>2. Introduction</b>	<ul style="list-style-type: none"> <li>• Background of the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>3. Types of Monitoring</b>	<ul style="list-style-type: none"> <li>• Description of the various types of monitoring that is used for the administration of the Habitat Bank</li> </ul>
<b>4. 20XX Monitoring Results</b>	<ul style="list-style-type: none"> <li>• Overview of monitoring results for each Habitat Banking Project (Detailed reports are included in Appendix A)</li> </ul>
<b>5. Next Year's Habitat Monitoring Report</b>	<ul style="list-style-type: none"> <li>• Overview of next year's anticipated habitat monitoring</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Habitat Banking Project Monitoring Reports
Appendix B	Monitoring Status and Proposed Monitoring Schedule

Draft: February 13, 2019

## **ANNEX E**

### **EXISTING PROJECTS**

The Habitat Banking Projects that are identified herein represent the status of the Habitat Bank and projects planned for the Habitat Bank as of the Effective Date of this Arrangement.

Table 1 – Habitat Banking Projects currently deposited in the Habitat Bank

Table 2 – Habitat Banking Projects that have been proposed by VFPA and accepted by DFO as appropriate for development and deposit into the Habitat Bank

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Draft: February 13, 2019

**Table 1.0 – Habitat Banking Projects Deposited to VFPA Habitat Bank**

No.	SITE	LOCATION	BANKED AREA (m <sup>2</sup> )	STATUS
1.	Salt Marsh Restoration – TFN (3.1 & 3.2)	Delta (Tsawwassen)	6,635 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
2.	Salt Marsh Restoration - Boundary Bay (3.3, 3.4 & 3.5)	Delta (Boundary Bay)	56,357 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
3.	Glenrose Tidal Marsh	Delta	10,778 m <sup>2</sup> (tidal freshwater marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
4.	Riverfront Park Tidal Marsh	Vancouver	1,481 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
5.	Gladstone Park Tidal Marsh	Vancouver	3,181 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
6.	Timberland Basin Habitat	Surrey	1,146 m <sup>2</sup> / 2,777 m <sup>2</sup> (tidal freshwater marsh / tidal freshwater mudflat)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
7.	New Brighton Park Shoreline Habitat Restoration Project	Vancouver	9,872 m <sup>2</sup> (salt marsh, marine tidal channel & mudflat, cobble/boulder beach, and marine riparian)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>

Draft: February 13, 2019

**Table 2.0 – Habitat Banking Projects Proposed by VFPA and accepted by DFO as appropriate for the Habitat Bank**

No.	SITE	LOCATION	APPROX. GROSS AREA (ha.)	STATUS
1.	Cates Landing Habitat Restoration	North Vancouver	~1.0 ha	• Complete
2.	Maplewood Marine Restoration Project	North Vancouver	~7.0 ha	• Permitting and approvals in progress
3.	Tsawwassen Eelgrass Project	Delta	~4.3 ha	• Permitting and approvals in progress
4.	South Arm Jetty Tidal Marsh Project	Richmond	~44.0 ha	• Permitting and approvals in progress
5.	Westham Island / Canoe Pass Tidal Marsh Project	Ladner	~4.0 ha	• Permitting and approvals in progress
6.	McDonald Tidal Marsh Project	Richmond	~2.8 ha	• Permitting and approvals in progress
7.	Point Grey Tidal Marsh Project	Vancouver	~41.0 ha	• To be advanced in future years
8.	Steveston Island Tidal Marsh Project	Richmond (Steveston)	~6.5 ha	• To be advanced in future years

Draft: February 13, 2019

## ANNEX F

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: USE OF HABITAT CREDITS TO MEET OFFSETTING REQUIREMENTS OF A *FISHERIES ACT* AUTHORIZATION**

Consultation with Indigenous peoples is required when Fisheries and Oceans Canada (DFO) makes a regulatory decision that may adversely impact potential or established Aboriginal or treaty rights, Indigenous groups and their related interests. Under the fisheries protection provisions of the *Fisheries Act*, a regulatory decision occurs when DFO contemplates the decision to authorize a work, undertaking or activity under section 35(2)(b) of the *Fisheries Act*. Indigenous consultation will normally take place after DFO has received an Application for Authorization and determined that the information requirements set out in the *Applications for Authorization* under Paragraph 35(2)(b) of the *Fisheries Act Regulations* have been met.

DFO will consult on the work, undertaking or activity being authorized under section 35(2)(b) of the *Fisheries Act* and any other aspects of the Authorization that have the potential to adversely impact potential or established Aboriginal or treaty rights, and related interests. The goal of these consultations will be to identify measures to avoid, minimise, or if required accommodate for, potential impacts of the work, undertaking or activity on the rights or interests of Indigenous peoples through mitigation and offsetting to be incorporated into the Authorization.

As the purpose of utilizing habitat banking credits is to meet offsetting requirements of an Authorization issued under section 35(2)(b) of the *Fisheries Act*, the proposed use of habitat banking credits is subject to Indigenous consultation.

Draft: February 13, 2019

## **ANNEX G**

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: HABITAT BANKING PROJECT DEVELOPMENT BY HEP**

#### **Overview and Purpose**

Indigenous consultation and engagement is a key element for the successful delivery of Habitat Banking Projects undertaken by VFPA's Habitat Enhancement Program (HEP). This Annex describes the process implemented by HEP for developing Habitat Banking Projects and identifies key points during the process for input and involvement by Indigenous groups. HEP's consultation and engagement with Indigenous groups aims to identify and address project-related impacts, to design and implement appropriate mitigation measures, and to explore opportunities for Indigenous involvement such as participation in field studies and/or employment, training and contracting. Subject to the discretion and direction of applicable regulatory agencies, including VFPA, HEP also aims to undertake consultation with Indigenous groups in accordance with the requirements of regulatory processes that are applicable to the Habitat Banking Project (such as VFPA's Project and Environmental Review Process).

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Draft: February 13, 2019

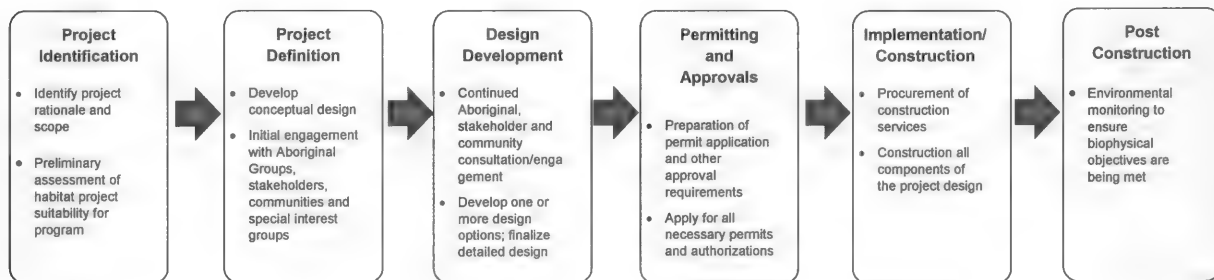
## Habitat Banking Project Development Process

The development of Habitat Banking Projects is achieved through six basic project management phases that are used to guide and control the project from start to finish.

Commencing with the identification of a potential project, the process provides for the structured development and advancement of all required components required for project delivery.

- Phase 1 (**Project Identification**) - The “idea” or the vision of what could be achieved.
- Phase 2 (**Project Definition**) - What are the project objectives? Constraints?
- Phase 3 (**Design Development**) - How will the project objectives be achieved?
- Phase 4 (**Permitting and Approvals**) - Obtaining formal permission to perform the work.
- Phase 5 (**Implementation/Construction**) - Construction of the habitat project.
- Phase 6 (**Post Construction**) - Ensuring long-term success of the habitat project.

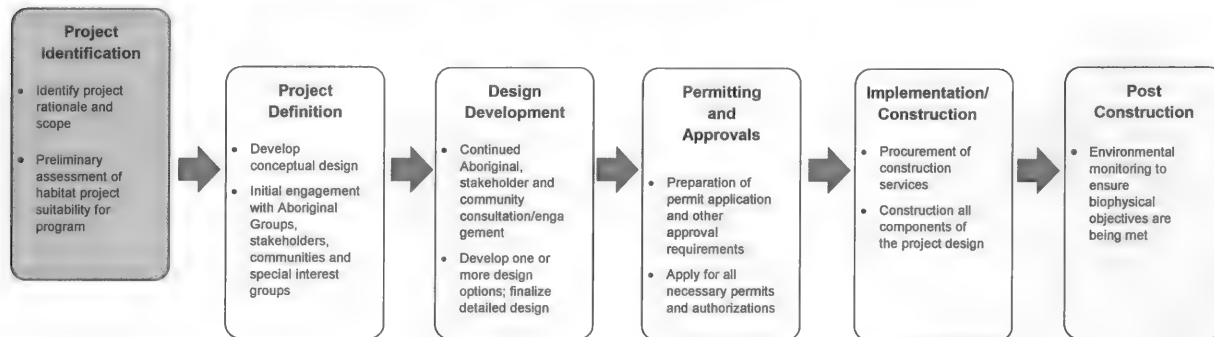
The illustration below depicts these six key project management phases and provides the key tasks associated with each.





Draft: February 13, 2019

## Phase 1 - Habitat Banking Project Identification



The identification of potential Habitat Banking Projects is a critical component of the project delivery process. Considerations include habitat need, habitat productivity, feasibility, cost, land tenure, DFO confirmation and Indigenous matters.

### Indigenous Consultation and Engagement

- HEP seeks input from Indigenous groups on identification of potential habitat enhancement sites*
- HEP seeks input from Indigenous groups on Habitat Banking Projects identified by others*
- Indigenous groups share available traditional knowledge, information and studies*

Draft: February 13, 2019

## Phase 2 - Habitat Banking Project Definition



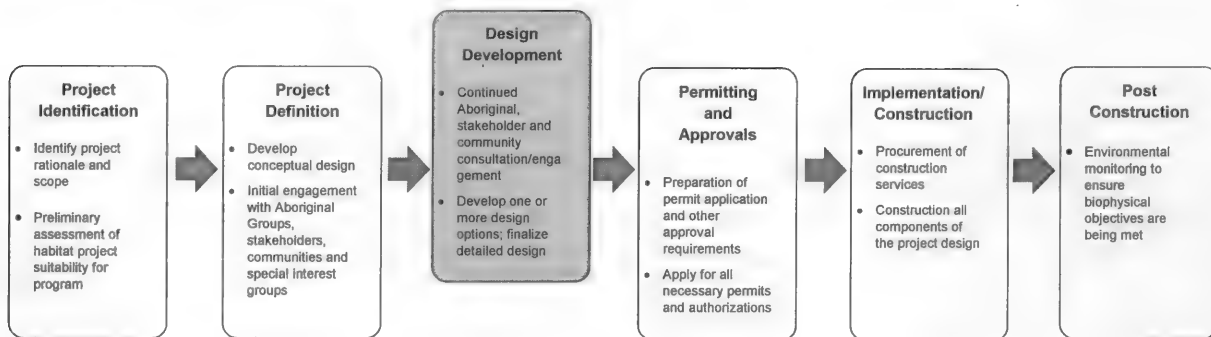
The development of conceptual designs is key in defining what a Habitat Banking Project could include. Using these concept designs, initial engagement and consultation on specific project features can commence.

### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on preferred engagement activities for project (e.g. Aboriginal Technical Design Committee)*
- *HEP consults Indigenous groups on project concept*
- *HEP identifies potential habitat values (i.e. credit estimates) that could be created and engages with interested Indigenous Groups*
- *Indigenous groups share Traditional Knowledge with HEP*
- *HEP identifies opportunity for involving Indigenous groups in field studies and assessments*
- *HEP commences planning for Indigenous involvement throughout project (e.g. contracting, employment and training opportunities)*

Draft: February 13, 2019

### Phase 3 - Design Development



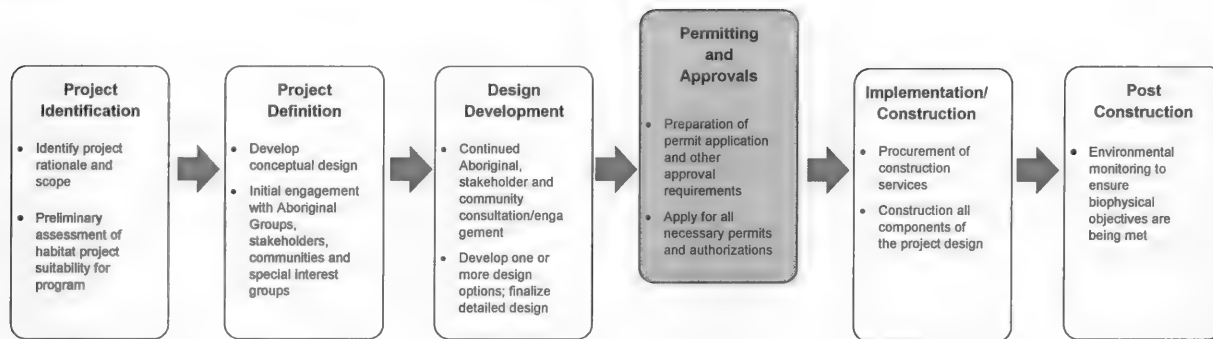
In the design phase, one or more designs are developed and evaluated. Through an iterative design process, a final design is selected and is refined to include all details necessary for construction.

#### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on the design options*
- *HEP considers Indigenous feedback and refines design of project where appropriate (including selection of plant species)*
- *Where required, HEP undertakes further consultation with Indigenous groups on the design*
- *HEP finalizes the design*
- *HEP shares final design with Indigenous groups*
- *HEP confirms habitat values (i.e. credits) and consults with Indigenous groups*
- *HEP obtains DFO confirmation of appropriateness of habitat project for the Habitat Enhancement Program*
- *HEP plans for continued Indigenous involvement in subsequent phases*

Draft: February 13, 2019

## Phase 4 - Permitting and Approvals



Permits and approvals that are required must be addressed on a project-by-project basis as regulatory requirements and land ownership can vary significantly.

### Indigenous Consultation and Engagement

- *HEP engages with Indigenous groups in relation to permits and approvals*
- *HEP develops a summary of permits and approvals required and shares with Indigenous groups*
- *HEP seeks Indigenous input and support on permit applications*
- *HEP notifies Indigenous groups on submission of permit applications*
- *Regulators and permitting authorities may undertake Indigenous consultation*
- *HEP plans for continued Indigenous involvement in subsequent phases*

Draft: February 13, 2019

## Phase 5 - Implementation/Construction



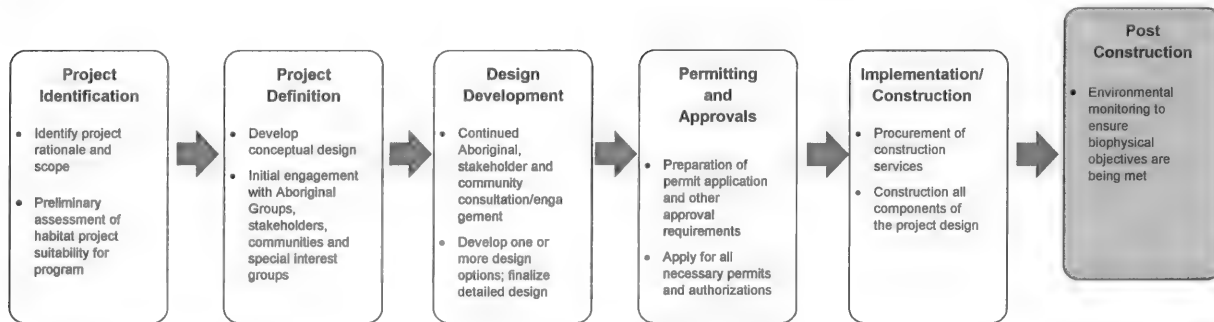
The Habitat Banking Project takes shape during the Implementation/Construction Phase.

### Indigenous Consultation and Engagement

- *HEP identifies approach to procurement and determines opportunities for Indigenous involvement/benefits*
- *HEP monitors conditions of approval/permits and any commitments to Indigenous groups*
- *HEP continues to keep Indigenous groups updated on progress of construction (e.g. sharing of construction monitoring reports)*
- *HEP plans for continued Indigenous involvement in Post Construction Phase*

Draft: February 13, 2019

## Phase 6 - Post Construction



### Indigenous Consultation and Engagement

- *HEP considers opportunities for enhanced integration of Indigenous input and identification of priorities into planning for post construction monitoring*
- *HEP shares Post Construction Monitoring Plan with Indigenous groups*
- *Potential contracting opportunities for Indigenous groups (e.g. maintenance, monitoring)*
- *HEP explores opportunities for enhanced sharing of information (e.g. data collection such as potential DNA analysis, fish use data etc.)*
- *HEP engages Indigenous groups regarding other types of reporting that the HEP can share that communicates project benefits and information of importance to Indigenous communities*



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

Sector Name

French translation

Sector Head Title

French Translation

UNCLASSIFIED

20##-###-####  
EKME #: #####

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MEMORANDUM FOR THE REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT  
BRANCH

**RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT WITH  
VANCOUVER FRASER PORT AUTHORITY  
(FOR DECISION)**

**SUMMARY OF ADVICE TO REGIONAL DIRECTOR, ECOSYSTEMS  
MANAGEMENT BRANCH**

The purpose of this note is to seek approval of a renewed Habitat Bank Arrangement (the Arrangement) with Vancouver Fraser Port Authority (VFPA).

If approved, the Arrangement will replace the current habitat banking Working Agreement established between the DFO and VFPA in 2012 and scheduled to expire on March 31, 2019, and will be valid for a period of 15 years, with provision for review every five years.

The Arrangement establishes the terms and conditions for the renewed management of the Port of Vancouver Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016).

Engagement and consultation with Indigenous groups with asserted or traditional territories or treaty lands within the service area of the Arrangement was jointly undertaken by DFO and VFPA. While few, the key concerns, issues and input received have been considered and the consultation process has been concluded. **NOTE: Byron will confirm whether or not additional feedback has been received since distribution of summary report.**

It is recommended that you approve and provide your signature to the renewed VFPA Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

## **BACKGROUND**

Over the past two years, since the release of *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016), DFO and VFPA have been negotiating an updated and renewed proponent-led Habitat Banking Arrangement to replace the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank* (2012).

The 2012 Agreement was set to expire in 2017, but was extended by letter to March 31, 2019 in order to allow for continued negotiation of a renewed Arrangement and for Indigenous engagement and consultation processes to be completed.

Several major considerations in the renewal of the Arrangement have been reconciled, including:

- Use of Credits by 3<sup>rd</sup> parties: The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.
- Credit valuation: The Interim Guide suggests that habitat credit valuation be mutually agreed up on based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction, with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.
- Land tenure: Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

.../3



- 3 -

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### STRATEGIC CONSIDERATIONS

The Arrangement establishes the terms and conditions for the renewed management of the Port of Vancouver Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016) and supports the Department in achieving its strategic outcome of 'sustainable aquatic ecosystems'. **NOTE: This section needs some additional information.**

This section is where the Department presents its advice to the Regional Director at the strategic level and must fully reflect RM views on policy or program development for which they are accountable.

- Options and their analysis
- Socioeconomic analysis
- Indigenous considerations
- Legal advice
- Link between the issue and advancement of the Department's agenda
- Explicitly note Cabinet processes and Budget proposals
- Environmental effects (in accordance with the Cabinet *Directive on the Environmental Assessment of Policy, Plan and Program Proposals* <http://www.ceaa-acee.gc.ca/default.asp?lang=En&n=B3186435-1>)
- Gender considerations (in accordance with Treasury Board Secretariat guidelines <http://www.tbs-sct.gc.ca/tbs-pct/gba-oacs-eng.asp>)

### SCIENCE ADVICE

This section is where the Department presents its science advice. It is mandatory for fisheries and resource management decisions, as well as notes which include important science considerations (e.g., external reports with science-related recommendations, etc.).

It is optional for all other notes.

Where not relevant – this section can be excluded in full. **NOTE: Byron – Should this section be removed or should I try to develop some wording reflecting general science advice related to offsetting, etc.**

### INTERDEPARTMENTAL CONSULTATIONS

Identify which departments/agencies were consulted in the development of the advice/briefing note, and their views. \_\_\_\_\_

**NOTE: No interdepartmental consultations occurred. Should this be noted here, or should this section to be removed completely?**

**Commented [MJ3]:** Use this section to justify the individuals listed in the ADDITIONAL APPROVALS section of the transmittal slip.

.../4

- 4 -

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### **INDIGENOUS CONSULTATIONS**

DFO and VFPA cooperatively developed and implemented an Indigenous engagement plan, and produced and distributed a report (*Summary of Indigenous Engagement on VFPA and DFOs Habitat Bank Arrangement*) documenting the engagement and providing responses to concerns brought forward.

Based on input received during the engagement process the following changes were incorporated into the Arrangement:

- DFO and VFPA agreed to change the standardized terminology from “conservation project” to “habitat banking project” in the final version of the Arrangement to better describe the purpose of the projects and to address Indigenous concerns related to the potential for “conservation” to be considered ahead of Indigenous interests.
- VFPA updated their framework for conducting consultation associated with future proponent-led habitat banking projects.

The Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process; however, the TWN has a new separate bi-lateral agreement with VFPA and no concerns have been brought forward that are specific to the Arrangement. **NOTE: Byron to follow up.**

### **EXTERNAL CONSULTATIONS**

No external consultations were conducted beyond the engagement with Indigenous groups documented above.

### **ADVICE AND RECOMMENDATIONS TO REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT BRANCH**

It is recommended that you approve and provide your signature to the renewed Port of Vancouver Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

---

Brad Fanos  
Director  
Fish and Fish Habitat Protection Program

.../5

- 5 -

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☐ I concur with the recommendations

☐ I do not concur with the recommendations

\_\_\_\_\_  
Cheryl Webb  
Regional Director  
Ecosystem Management Branch

Attachment(s): (#) (if applicable)

1) Description of the attachment(s) (EKME #)

**Commented [MJ4]:** List all attachments and their EKME numbers. Ensure attachments are attached and label attachments with a tab corresponding to the number in this section.

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Fisheries and Oceans Canada  
Correspondence Routing Slip

Fiche d'acheminement de correspondance  
Pêches et Océans Canada

UNCLASSIFIED  
GCCMS # : 20##-###-####  
EKME # : #####

To: Cheryl Webb  
Pour:

Date:

**Commented [MJ5]:** Do not input date. This is to be dated once all parties have approved the note.

Object: TITLE  
Objet:

From / De: Brad Fanos, Director, Fish and Fish Habitat Protection Program

☐ Material for the Minister  
Documents pour le Ministre

X

Your Signature  
Votre signature

☐ Information

**Commented [D6]:** For SEP and Oceans, include Brigid's information in this section.

Remarks: This briefing note was developed in consultation with the following  
Remarques: regions/sectors: (please list who was consulted internally)

**Commented [MJ7]:** Any SMEs/Additional Approvers who provided input or assisted in the development of this note.

Please ensure each individual listed in this section has initialled beside their name prior to bringing the docket to the RD.

Distribution: Please indicate name(s) of people to receive a copy following the RD approval. (Remove text if no Distribution is required)

**Commented [MJ8]:** List any individuals who should receive a copy once approved. This is a great tool to use if you need to inform individuals about a docket, but whom do not need to be consulted during the development of the note.

Drafting Officer/ Rédacteur:

NAME (TEL #) / Director / admin initials

**Commented [MJ9]:** Please fill this section in the same format provided. The Director should be Cheryl for FPP/SARA dockets and Brigid for Oceans/SEP dockets.

**Hwang, Jason**

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**From:** Hwang, Jason  
**Sent:** February-18-19 10:24 AM  
**To:** Nutton, Byron  
**Subject:** RE: VFPA Habitat bank - DRAFT BN

I would not add too much to the content you have provided. Under strategic considerations you might mention that we have had a habitat banking arrangement with the port for xxx years, and that the port and DFO have found the arrangement beneficial. And perhaps also add that significant effort has been invested in updating this long standing agreement. Lastly, you could emphasise that the agreement provides for review every 5 years, so it can be renewed or updated should we find something we want to adjust.

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-18-19 7:51 AM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** VFPA Habitat bank - DRAFT BN  
**Importance:** High

Hey Jason,

Please see attached:

- DRAFT BN for RD sign-off. Some work still needed, but I would appreciate your feedback on the content overall – particularly the type of information I should be including in “Strategic considerations”
- DRAFT Arrangement – latest draft, just received on Thursday – Suzanne and I will be reviewing and discussing in the next couple days prior to our regularly scheduled bi-weekly call with VFPA on Thursday.

I still have a couple actions outstanding:

- Final follow-up on any additional Indigenous concerns – tomorrow when I’m in the office.
- Final follow-up with Policy on regional review process – will watch for something from them on my BB today.

Cheers,

*Byron Nutton, RPBio*

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

**Hwang, Jason**

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**From:** Hwang, Jason  
**Sent:** February-18-19 10:16 AM  
**To:** Nutton, Byron  
**Subject:** RE: renewal of VFPA Habitat Bank Arrangement

I would suggest we let them know it is probably best if we proceed without their review. We do not have the time. And there will not be value added from someone who does not have expertise in the subject matter to review this agreement.

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-18-19 10:04 AM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** Fw: renewal of VFPA Habitat Bank Arrangement

Sent from my BlackBerry 10 smartphone on the Rogers network.

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**From:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Sent:** Monday, February 18, 2019 9:55 AM  
**To:** Nutton, Byron  
**Subject:** RE: renewal of VFPA Habitat Bank Arrangement

Hi Byron,

Apologies for the delay in getting back to you regarding this. Generally we would review these however the individual that did that in Policy no longer works on this team. Sarah has reached out to a new individual joining Policy if she is able to help out with this request (and if she has experience with this) but we have yet to hear back from her. As soon as we get an update from her I will be able to confirm with you. If she is unable to help out with this request, the agreement can be sent for sign-off.

Please let me know if you have any questions or concerns.

All the best,

**Gaby Good for Kirsten Lawrie**

Executive Assistant to Sarah Murdoch, Policy and Economic Analysis/ Assistant exécutif à Sarah Murdoch, Politique et analyse économique  
Fisheries and Oceans Canada/Pêches et Océans Canada  
[kirsten.lawrie@dfo-mpo.gc.ca](mailto:kirsten.lawrie@dfo-mpo.gc.ca) | 604-666-0385

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**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-15-19 3:56 PM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Bank Arrangement  
**Importance:** High

Hi again Gabby,

Thanks for chatting with me just now.

As I mentioned, I am under quite a bit of pressure to advise my director whether or not there is a formal regional review process that needs to be undertaken before we can move the agreement forward for sign-off.

Again, we are not looking for any help or even requesting that a broader review be undertaken, we just want to be certain that we are not skipping a step if there is a requirement to do such a review.

Thanks again for your time, and I look forward to hearing from you on Monday.

Cheers,

Byron

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**From:** Nutton, Byron  
**Sent:** 2019-February-13 3:43 PM  
**To:** Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>  
**Subject:** FW: renewal of VFPA Habitat Bank Arrangement  
**Importance:** High

Hi Gabby (for Kirsten),

As discussed, this is in follow-up to the request from Jason Hwang to Policy (via Kirsten) a couple of weeks ago regarding Fisheries Protection Program (FPP) finalizing the renewal of an existing Habitat Banking arrangement with Vancouver Fraser Port Authority (VFPA). That initial request was forwarded by Kirsten to a couple folks in Finance and Business Management, but it appears that was based on a mis-understanding as both of those people have confirmed they have no "interest" (for lack of a better word) in the issue, so please see the following additional detail/clarification.

This began recently with a request from Brad Fanos (Director, FPP) during his review of the nearly final draft arrangement, on which we have been negotiating with VFPA and engaging with Indigenous groups over that last couple years. According to Brad, at some point Policy was managing a regional process for vetting agreements to confirm the legislative and mandate authorities, and linkages with other sectors and programs. Brad asked that Jason enquire with Policy if this process was still in place, which he did. As mentioned above, based on the subsequent e-mail exchanges, it appears the request was mis-understood/directed. Perhaps the word "banking" was taken a bit out of context, explaining why it was forwarded to finance/business management?

A habitat banking arrangement relates to habitat offsetting requirements when FPP issues an Authorization to a developer to allow the destruction of fish habitat. Basically, the developer is required to replace the habitat that is destroyed with new or improved habitat. Typically a developer will negotiate the offsetting plan at the time they are requesting an Authorization and then build both their development and the offsetting at the same time. In contrast, a habitat banking arrangement allows a developer to build the offsetting habitat in advance, and then later propose to use the "habitat credits" in the bank to meet offsetting requirements of some future potential Authorization. It is all very much contained within FPP operations.

At this point we simply want to be certain that we are going through any broader regional vetting process that Policy is managing (if such a thing exists) before we move it up the line for approval.

I hope this clarifies the issue and the request and I look forward to your response.

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

As I mentioned on the phone I do have some time constraints, so please don't hesitate to call me if you need anything further.

Thanks for your time,

Byron

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

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**From:** Thorpe, Suzanne  
**To:** Nutton, Byron  
**Subject:** FW: February 13 2019 version of VFPA-DFO Habitat Bank Arrangement - FOR DFO REVIEW  
**Date:** 2019-February-20 12:59:44 PM  
**Attachments:** 2019-02-13 VFPA proposed changes to Habitat Bank Arrangement.docx  
Habitat Bank Arrangement Compare (Red Line) Aug 14 2018 version vs Feb 13 2019.pdf  
2019-02-20 VFPA proposed changes to Habitat Bank Arrangement\_STEdits.docx  
**Importance:** High

---

Byron;

I have reviewed the revised documents submitted by VFPA to DFO, date of draft: February 13, 2019.

I have no further comments and do not recommend any further substantive changes or edits.

—  
If we want to be extremely picky – there are a couple of very minor edits that could be undertaken. I have highlighted these in RED and attached it to this email, per today's date/\_STEdits.

p.12 should be "will be" instead of "are/is" [for document consistency]

p.32 comma missing, p. 35. comma missing, p. 36 commas missing

Hope this is helpful. I'll let you decide whether or not to complete edits or leave it.

Suzanne

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Wednesday, February 13, 2019 3:40 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** RE: February 13 2019 version of VFPA-DFO Habitat Bank Arrangement - FOR DFO REVIEW  
**Importance:** High

Good afternoon Byron

As discussed last week, VFPA is pleased to provide an updated February 2019 version of the draft VFPA-DFO Habitat Bank Arrangement for your review.

Of note:

1. The word document attached dated Feb 13/19 is the most current version of the Arrangement, which includes all edits and input provided by DFO to-date, including your

email from Feb 1/19 and the notes below from our conference call on Feb 7/19. **Please ensure you/DFO use this attached Feb 13/19 draft for your final DFO reviews.**

2. The PDF attached is a comparison document (red-line version) that shows all the mark-ups/changes made between the previous version (Aug 14/18) and the current version (Feb 13/19).
3. [REDACTED]
4. All staff/position titles were updated as provided by DFO Feb 1/19, and also include recent updates to VFPA staff titles since the August 2018 version.
5. We also specifically updated Annex G (see yellow text shown on the PDF on page 35 & 36) to reflect input received from Indigenous groups in relation to VFPA's Indigenous consultation and engagement process. Note that this content is consistent with the commitments VFPA made in the Feb 1/19 final draft of the "Summary of Indigenous Engagement on VFPA's and DFO's Habitat Bank Arrangement" report.
6. The February Arrangement version attached also includes a detailed quality review/edit of minor grammatical errors, formatting, and removal of all "Note to Draft (NTD)" highlights/comments – no other material changes were made.

Please review. Our next call with you on this is Thursday Feb 21, and we look forward to finalizing a final sign-able document in the coming few weeks!

Regards,

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

**From:** Olson, Charlotte

**Sent:** Friday, February 08, 2019 12:40 PM

**To:** 'Nutton, Byron' <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>; 'Thorpe, Suzanne' <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>

**Cc:** Ruffo, Gord <[Gord.Ruffo@portvancouver.com](mailto:Gord.Ruffo@portvancouver.com)>; Scoble, Jemma <[Jemma.Scoble@portvancouver.com](mailto:Jemma.Scoble@portvancouver.com)>; 'Jemma Scoble' [REDACTED]

**Subject:** RE: Thursday Feb 7 Call w VFPA - Actions and Follow Up

Hi Byron and Suzanne, thanks for the call yesterday

Please find attached the updated Actions list from Feb 7/19.

Suzanne, please note that [REDACTED] VFPA will provide the IG notification records that you asked for (see item #5 on actions list), [REDACTED]

Also, [REDACTED]

VFPA will include these items as discussed with DFO, within our next Arrangement version:

s.19(1)

s.21(1)(a)

s.21(1)(b)

1. Keep the proposed term as 15yrs in the February 2019 Arrangement draft
2. Cheryl Webb is still the signatory (as of right now)
3. DFO's response to the VFPA "NTD" question in Section 12 was simply that the template had this review section included. DFO did offer that the template had the wording "**may** review" rather than our current draft that has "**will** review". [REDACTED]
4. DFO's response to the "NTD" comment in Annex F was that the following legislation title should be italicized, otherwise they confirmed that the reference is correct:  
"Indigenous consultation will normally take place after DFO has received an Application for Authorization and determined that the information requirements set out in the *Applications for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations*"

As discussed, I expect to get the February 2019 version of the Arrangement back to you by Feb 15 (next Friday) at the latest. We are getting close!

[REDACTED]

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

**s.19(1)**  
**s.21(1)(a)**  
**s.21(1)(b)**

**Pages 2206 to / à 2241**  
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Draft: February 13, 2019

**Deleted:** VFPA proposed changes dated August 14, 2018

**Habitat Bank Arrangement:**

**PORT OF VANCOUVER HABITAT BANK**

Between

**VANCOUVER FRASER PORT AUTHORITY**

AND

**HER MAJESTY THE QUEEN IN RIGHT OF CANADA**, as represented by the Minister of  
Fisheries and Oceans on behalf of Fisheries and Oceans Canada ("DFO")

●xxxxxx, 2019

**Deleted:** 2018

**PATH Number: [INSERT PATH NUMBER]**

Draft: February 13, 2019

Deleted: VFPA proposed changes dated August 14, 2018

## 1. INTRODUCTION

This document sets out the principles of the mutual understanding between **Vancouver Fraser Port Authority ("VFPA")** and Fisheries and Oceans Canada ("DFO") (hereafter referred to as "the Participants") for the **Port of Vancouver Habitat Bank ("Habitat Bank")**.

### WHEREAS:

- a. Fisheries and Oceans Canada (DFO) is responsible for the administration of the *Fisheries Act*, more specifically the fisheries protection provisions including sections 6, 20, 21, 35, 37, and 38 related to the conservation and protection of Canada's marine and freshwater fisheries resources and their habitats from the impact of human activities. The purpose of the fisheries protection provisions, as set out in section 6.1 of the *Fisheries Act*, is to provide for the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries;
- b. DFO is responsible for the administration of the *Species at Risk Act* ("SARA") with respect to aquatic species other than those individuals in or on federal lands administered by the Parks Canada Agency and, in that capacity, the Minister of Fisheries and Oceans has powers and duties with respect to protecting aquatic species listed under that Act and providing for their recovery;
- c. The Fisheries Protection Policy Statement's goal is to promote compliance with the *Fisheries Act* in order to contribute to the purpose set out in section 6.1 of the *Fisheries Act*;
- d. This Arrangement does not commit DFO to the authorization of any future work, undertaking or activity requiring an authorization under paragraph 35(2)(b) of the *Fisheries Act*, or permit any future project requiring a permit under sections 73 and 74 of the *Species at Risk Act*. All future projects will be reviewed on their own merit and a decision on whether to authorize or permit will be made independent of the existence of a habitat bank arrangement. This Arrangement, and any related communications between DFO and VFPA do not constitute a representation or commitment of any kind regarding authorization of any future projects by DFO. This Arrangement, and any related communications, moreover does not constitute a commitment that any habitat credits that may be issued will be acceptable in the context of future applications for *Fisheries Act* authorizations or SARA permits.
- e. VFPA is a port authority established by the Government of Canada pursuant to the *Canada Marine Act* and is accountable to the federal Minister of Transport. VFPA has a mandate to facilitate Canada's trade objectives, ensuring goods are moved safely, while protecting the environment and considering local communities. In fulfilling the mandate, VFPA carries out a variety of duties, including infrastructure development to support growth and efficient operations. The Habitat Bank can support such infrastructure development when habitat credits are acceptable in the context of future *Fisheries Act* authorizations or SARA permits.

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Draft: February 13, 2019

Deleted: VFPA proposed changes dated August 14, 2018

- f. The Participants entered into a Working Agreement dated July 31, 2012 ("Working Agreement") relating to the procedures for development and operation of a VFPA-led habitat bank for a five (5) year trial period which was extended by the Participants to March 31, 2019;
- g. VFPA has undertaken several habitat creation and enhancement projects in consultation with DFO pursuant to the Working Agreement, which are included in Annex E ("Existing Projects"); and
- h. This Arrangement will replace the Working Agreement and the Existing Projects will be managed pursuant to this Arrangement.

Deleted: September 10, 2018

**THEREFORE**, the Participants agree to the following arrangement ("Arrangement").

## **2. PURPOSE**

To support VFPA in fulfilling its mandate (referred to in paragraph e above) by facilitating infrastructure development when habitat credits from the Habitat Bank can be applied to meet future offsetting requirements for such development.

To replace the Working Agreement with this Arrangement and to establish revised principles for the continuation and management of the Habitat Bank by:

- establishing a working relationship between the Participants based on trust, accountability and information sharing;
- establishing a clear understandable Arrangement for managing the Habitat Bank; and
- increasing certainty in the administration of the Habitat Bank.

## **3. OTHER GENERAL INFORMATION**

The activities carried out under this Arrangement will be consistent with:

- *Fisheries Protection Policy Statement* (2013);
- *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting* (2013);
- *Interim Fisheries Protection Program's Guide to Proponent-led Habitat Banking* (October, 2016) ("Guide");
- any relevant Species at Risk Recovery Strategies and management considerations; and
- any relevant Fisheries Management Objectives.

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Draft: February 13, 2019

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#### 4. SCOPE

The scope of this Arrangement is limited to the continuation and administration of the Habitat Bank described in Annex A, and including Habitat Banking Projects and the Existing Projects (described in Annex E). For the purposes of this Arrangement, a "Habitat Banking Project" shall mean a conservation project proposed in accordance with Annex B.

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#### 5. ROLES AND RESPONSIBILITIES

Deleted: The scope of this Arrangement is limited to the continuation and administration of the Habitat Bank described in Annex A, and including conservation projects proposed in accordance with Annex B and the Existing Projects (described in Annex E).¶

The roles and responsibilities of the VFPA are:

- Jointly managing the performance of the Arrangement with DFO;
- Identifying designing, constructing, monitoring, maintaining, and protecting Habitat Banking Project sites;
- Meeting all other applicable federal, territorial, provincial and municipal requirements that apply to Habitat Banking Projects;
- Reporting on performance of Habitat Banking Projects;
- Accurately maintaining a copy of the habitat credit ledger; and
- Preparing and submitting Progress Reports for the Arrangement.

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The roles and responsibilities of DFO are:

- Jointly managing the performance of the Arrangement with VFPA;
- Reviewing, providing advice and confirming Habitat Banking Project proposals;
- Reviewing Progress Reports, validating habitat credit balances in the habitat credit ledger, and processing habitat credit ledger transactions;
- Verifying the reported results of Habitat Banking Project performance in the Progress Reports;
- When appropriate, carrying out direct monitoring (i.e., a site visit to gather and analyse samples or information in order to directly verify compliance and effectiveness) and/or carrying out indirect monitoring (i.e., an assessment of information provided in Progress Reports to verify compliance and effectiveness) of Habitat Banking Project sites; and
- Reviewing and processing Progress Reports of the Arrangement.

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The Participants shall fulfill their responsibilities under this Arrangement in accordance with the provisions of federal, provincial and territorial laws and regulations that govern their activities. Should a Participant not be able to perform a function under this Arrangement, the affected Participant will immediately contact the other signatories of this Arrangement so that early resolution can be reached.



Draft: February 13, 2019

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## 6. MANAGEMENT PROVISIONS

This Arrangement establishes the following management provisions for the administration of the Habitat Bank:

- The accountability lies with the office of signatories of the Arrangement: Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.
- The day to day administration of the Arrangement will be carried out by: Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region.

Deleted: Infrastructure Sustainability

Deleted: Program

Deleted: Enhancement Program

Deleted: Team Lead, Partnerships, Standards

Deleted: Guidelines, Fisheries

## 7. ADMINISTRATION OF THE HABITAT BANK ARRANGEMENT

- Specific details related to the principles of the administration and operation of the Habitat Bank are included in Annex A;
- Habitat Banking Projects that are proposed for development are to be submitted for review and confirmation by DFO using the "Project Confirmation" template set out in Annex B;
- Habitat credits held within the Habitat Bank shall be tracked using the "Habitat Credit Ledger" template and frequency set out in and described in Annex C;
- Progress Reports shall be prepared and submitted annually in accordance with the requirements of Annex D;
- Existing Projects that were either constructed or proposed for construction under the terms of the Working Agreement are identified in Annex E; and
- Indigenous consultation and engagement related to the use of habitat credits is described in Annex F.

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## 8. SHARING OF INFORMATION

While this Arrangement is in effect and at all times thereafter, each of DFO and VFPA and any officers, employees or agents of each of them shall treat all information, data, documents, reports and materials acquired or to which access have been given in the course of, or incidental to, the performance of this Arrangement as confidential, subject to the federal *Access to Information Act* and the *Privacy Act*. With the exception of the Arrangement, the annexes to the Arrangement and annual Progress Reports, which VFPA may disclose from time to time, the Participants shall not disclose or permit to be disclosed such information, data, documents, reports and materials, unless:

- the Participants agree to the disclosure;
- the disclosure is part of the application and review process of VFPA's Project and Environmental Review for a proposed Habitat Banking Project, which would include disclosure of project-specific information, engagement information for

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- public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of the application and review process by DFO for a proposed development project that would utilize habitat banking credits as offsetting, which would include disclosure of project-specific information, engagement information for public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of an application and review process of other regulatory agencies (such as Environment and Climate Change Canada for Disposal at Sea permit or exemption) for a proposed Habitat Banking Project, which would include disclosure only as required by such agencies;
- the disclosure relates to consultation and engagement with Indigenous groups as part of the Indigenous Consultation and Engagement Process set out in Annex G;
- the disclosure is to a third party as part of the Habitat Bank Administration as described in Annex A;
- the disclosure is required by law;
- the information was obtained from the public; or
- the information is available to the public.

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## 9. CONSULTATION AND ENGAGEMENT

The Participants will collaborate on an approach to meaningfully engage and consult with Indigenous groups having regard to the process being undertaken by VFPA's Habitat Enhancement Program for the development of Habitat Banking Projects and the involvement of Indigenous groups that is described in Annex G.

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## 10. DIFFERENCES IN INTERPRETATION AND APPLICATION

The Participants will endeavor to resolve issues regarding the implementation of this Arrangement in a timely manner using mechanisms available to the Participants. Where an issue remains unresolved, the pre-eminent jurisdiction responsible for the matter under consideration will make the final determination and seek concurrence from Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.

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## 11. PROGRESS REPORTS

The VFPA will prepare progress reports using the form described in Annex D ("Progress Report") on the achievements and challenges encountered during the reporting period of this Arrangement as it relates to the purposes identified in section 2 of this Arrangement.

The Progress Report should be submitted within ninety (90) calendar days from the conclusion of each year. A year will be considered to run from January 1 to December 31.

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The Progress Report will be submitted to the Office of signatories of the Arrangement, Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region, for their concurrence.

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All Progress Reports will conform to the requirements set out in Annex D.

## 12. REVIEW

At the end of each five (5) year period during which this Arrangement is in effect, the Regional Director, Ecosystems Management, DFO Pacific Region, may establish a review team consisting of Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region, or an appropriately qualified and mutually agreed to third party to review the effectiveness of activities under this Arrangement. This review team will report to the Regional Director, Ecosystems Management, DFO Pacific Region, within six (6) months of being established.

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## 13. AMENDMENT

The Arrangement may be amended at any time in writing and by mutual consent of the Participants. An amendment will be confirmed by an exchange of letters, signed by the Participants, setting out the amendment and its effective date.

## 14. FINANCIAL ARRANGEMENT

This Arrangement will not impose any additional financial responsibilities on the Participants, except that each Participant will be responsible for the staff and funding costs it incurs in its own interests, related to the support of the Arrangement.

## 15. DURATION, WITHDRAWAL AND TERMINATION

This Arrangement is in effect from the date first written above for a period of fifteen (15) years. VFPA can request renewal of the Arrangement for an additional defined term (of no less than five (5) years) by providing one year's written notice to the other Participant. If this Arrangement is not renewed at the expiration of the term or a renewal, and provided that VFPA is not in breach of this Arrangement, the Participants will continue to apply the terms of this Arrangement to all Habitat Banking Projects that are either deposited in the Habitat Bank or have been confirmed by DFO in accordance with Annex B.

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## 16. LEGAL DISCLAIMER

This Arrangement is an expression of the mutual intentions of the Participants and is not legally binding or enforceable against them.

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## 17. NOTICE

All notices to be given under this Arrangement shall be in writing and shall be sent by prepaid registered mail or electronic transmission addressed to the Party entitled to receive the same, or delivered to such party as follows:

- if to VFPA:

Vancouver Fraser Port Authority (VFPA)  
100 The Pointe  
999 Canada Place  
Vancouver, British Columbia  
V6C 3T4

Attention: Director, Container Terminal Construction  
E-mail:

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with a copy to:

Attention: Director, Legal Services  
E-mail:

- if to DFO:

Fisheries and Oceans Canada (DFO)  
Pacific Region, Ecosystems Management Branch  
Suite 200 – 401 Burrard Street  
Vancouver, BC  
V6C 3S4

Attention: Regional Director  
E-mail:

## 18. GENERAL

VFPA is entering into this Arrangement on its own behalf and not as agent of Her Majesty in Right of Canada.

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**EFFECTIVE DATE AND SIGNATURE**

This Arrangement has been signed by the Regional Director of DFO Pacific Region of Fisheries and Oceans on behalf of Her Majesty the Queen in Right of Canada and by the VFPA on the dates noted below.

SIGNED IN THE PRESENCE OF:

FOR HER MAJESTY THE QUEEN IN RIGHT OF CANADA

\_\_\_\_\_  
Cheryl Webb  
Regional Director  
Ecosystems Management  
DFO Pacific Region

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

FOR VANCOUVER FRASER PORT AUTHORITY

\_\_\_\_\_  
Robin Silvester  
President and CEO

\_\_\_\_\_  
Witness (as to both)

\_\_\_\_\_  
Mark Gustafson  
Corporate Secretary

\_\_\_\_\_  
Date

This Arrangement comes into effect on the date that both Participants have signed above.

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## **ANNEX A**

### **HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK**

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ANNEX A: HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK	
Information Required	Description
Habitat Bank Location ("Service Area")	<p>The Service Area of the Habitat Bank will include <u>Habitat Banking Projects</u> situated geographically within the lands and waters managed by VFPA and within the navigational jurisdiction of VFPA pursuant to its Letters Patent, as amended from time to time. The Service Area includes the Fraser River Estuary and its tributaries, Burrard Inlet, the Strait of Georgia and its associated inlets (See Figure 1.0 below) and will include other areas as established from time to time as mutually agreed to by the Participants.</p> <p>Figure 1.0 Service Area of the Habitat Bank</p> 
Habitat Bank Administration	<p>The Habitat Bank is a long-term initiative, comprised of <u>Habitat Banking Projects</u>, that is used to proactively create, restore or enhance fish habitat to benefit fish and wildlife species. Consistent with VFPA's mandate, this enables VFPA to balance future infrastructure development opportunities with a healthy environment.</p> <p><u>Site Selection:</u> <u>Habitat Banking Projects</u> for the Habitat Bank will generally be selected based on the following considerations and criteria:</p>

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- (a) Need: Locations characterized by low productive capacity for species and stocks of interest or species at risk will be considered as a priority for the Habitat Bank. The intent is to develop or improve habitat capacity in the Service Area where habitat is needed and in support of applicable DFO policies.
- (b) Habitat Productivity: Emphasis will be placed on creation of high value habitat types that support a large number of ecological services and species functions (e.g. eelgrass beds and low marshes). The value of productivity will be assessed in the context of "need" (see (a) above).
- (c) Site location: Sites for the Habitat Bank will be selected based on their proximity to potential development areas with significant or rare ecological habitats or where onsite habitat compensation opportunities may be limited.
- (d) Feasibility and cost: Coastal zone processes, river hydraulics biological productivity and ecological functioning are amongst the factors that will be used to determine the feasibility of habitat creation. In some areas it may not be possible to achieve stable self-functioning habitat due to ongoing influences of physical processes. Further, some habitat creation options may be possible but only at extreme high cost. Consideration may be given if these habitat types are critical for endangered or threatened species and the habitat credit applied to the Habitat Bank recognizes the increased cost of development.

Through regular liaison meetings between DFO and VFPA representatives, potential Habitat Banking Projects are identified and discussed.

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DFO's confirmation of the appropriateness of a proposed Habitat Banking Project for inclusion in the Habitat Bank is achieved through submitting the project for review and confirmation by DFO using the "Project Confirmation" template set out in Annex B.

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#### Habitat Credits:

Habitat credit valuation will be established specifically for each Habitat Banking Project. This valuation will include the unit of measure and the value of the credits to be deposited in the Habitat Bank. A description of the approach and the analysis performed will be included in the preparation of the "Project Confirmation" using the template set out in Annex B.

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Habitat Banking Projects will be recorded as a deposit into the Habitat Bank on the Habitat Credit Ledger upon completion of construction of the Habitat Banking Project using the template set out in Annex C.

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	<p>The actual productive value of a particular <u>Habitat Banking Project</u> will be determined immediately prior to its proposed use as credit to offset a development project.</p> <p>VFPA shall, either through ownership, lease, licence or other agreement, ensure that a <u>Habitat Banking Project</u> site is protected at least until the withdrawal of the habitat credits from the Bank that are associated with the <u>Habitat Banking Project</u> site.</p> <p><u>Third Parties:</u></p> <p>VFPA may develop <u>Habitat Banking Projects</u> for inclusion in the Habitat Bank in collaboration with third parties. Once included in the Habitat Bank, such <u>Habitat Banking Projects</u> will be treated in the same manner as other <u>Habitat Banking Projects</u> that have been placed into the Habitat Bank.</p> <p>VFPA may enter into agreements with third parties to allow withdrawal of habitat credits, as defined by this Arrangement, when such an agreement facilitates development activities that support VFPA in fulfilling its mandate.</p>
<b>Bank Establishment Date</b>	<p>July 31, 2012 for a five (5) year trial period under the terms of the Working Agreement, which was executed on September 10, 2012, and which was extended by the Participants to <u>March 31, 2019</u>, and which was replaced by this Arrangement for a term of fifteen (15) years <u>from the date this Arrangement comes into effect.</u></p>

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## **ANNEX B**

### **FORM OF PROJECT CONFIRMATION**

The following document template (titled Project Confirmation) will be used to identify and confirm that a proposed Habitat Banking Project is appropriate and confirmed for development and deposit in the Habitat Bank.

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 <b>PORT of vancouver</b> Habitat Enhancement Program	 Fisheries and Oceans Canada / Pêches et Océans Canada <u><b>Project Confirmation</b></u>
<b>PROJECT NAME:</b>	

#### Terminology used:

- **"Arrangement"** refers to the arrangement between Fisheries and Oceans Canada and Vancouver Fraser Port Authority for the management and administration of the Vancouver Fraser Port Authority Habitat Bank
- **"DFO"** refers to Fisheries and Oceans Canada
- **"FPIP"** refers to *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting (2013)*
- **"VFPA"** refers to Vancouver Fraser Port Authority
- **"Project"** refers to the proposed \_\_\_\_\_
- **"QEP"** refers to a Qualified Environmental Professional

#### Preamble:

In accordance with the Arrangement, this Project Confirmation will be used to confirm that:

- VFPA consulted and negotiated with DFO on the suitability of the above-referenced Project for habitat banking purposes.
- DFO agrees, in principle, that the above-referenced Project would be acceptable as fish habitat as identified herein.
- DFO agrees that the identified type of fish habitat and the approximate quantity of fish habitat would be suitable for habitat banking.
- The Project meets the terms of the Arrangement with regard to need, fish habitat, productivity, site location, feasibility/cost, and ownership/tenure.
- DFO acknowledges that VFPA has developed the project concept and will move to final design as identified in the attached drawings.

*This Project Confirmation is used to support the conditions and requirements of the Arrangement and does not alter or modify the Arrangement in any manner. This Project Confirmation will also be used to confirm that the Project, if constructed as proposed, meets the objectives of the FPIP. An assisted assessment has determined that a DFO regulatory review pursuant to the Fisheries Act is not required for the Project. This assessment was conducted by a QEP in accordance with guidance from DFO's Projects Near Water web site and DFO's "Science Advice for Managing Risk and Uncertainty in Operational Decisions of the Fisheries Protection Program" (2014). As would be expected for a viable habitat enhancement opportunity, this assessment concluded that the Project will not result in Serious Harm to fish that contribute to commercial, recreational or Aboriginal (CRA) fisheries.*

*As the Project proceeds, VFPA will maintain responsibility to ensure that the Project has undergone appropriate reviews and assessments, including those mandated by applicable environmental assessment legislation (e.g., Species at Risk Act, if applicable) and any other VFPA-mandated reviews and assessments.*

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<b>Project Overview:</b>	
<ul style="list-style-type: none"> <li>• Description of the proposed project and how the proposed project will result in the creation of fish habitat that will provide long-term benefits for targeted species of fish such as salmon, aquatic species at risk or other species that may utilize the project area.</li> <li>• Description and valuation of the ecological functions that the proposed project will include.</li> <li>• Brief description of the proposed construction activities, including how they will be undertaken to avoid and mitigate any impacts to fish and fish habitat.</li> <li>• Brief description of the proposed timing for project completion, including post-construction monitoring.</li> </ul>	
Water feature name:	
<b>Location of Works</b>	
Regional district/ land use authority:	
City/municipality:	
Lat./Long.	
Property ownership:	
<b>Description of Pre-Construction Values</b>	
<ul style="list-style-type: none"> <li>• Description of pre-construction habitat values and conditions, including biophysical attributes</li> <li>• Description of pre-construction use of the area, including site history as appropriate</li> </ul>	
<b>Description of Proposed Activities</b>	
<ul style="list-style-type: none"> <li>• Detailed description of construction activities and design approach</li> <li>• Includes attachment of design drawings, and proposed habitat area for construction</li> <li>• Description of construction methodology and detailed mitigation measures</li> </ul>	
Overall work schedule:	
Least risk work window:	
<b>Potential Habitat Gains and Anticipated Affected Areas</b>	

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- Description of habitat gains, and anticipated affected habitat, table format

Habitat Type	Potential Habitat Gain (m <sup>2</sup> )	Anticipated Affected Habitat (m <sup>2</sup> )	Comments
X Habitat Type			
Habitat Gains and Affected Habitat			

### Fish Productivity Investment Policy Considerations

- Description and high-level summary of how the proposed project is expected to comply with FPIP objectives, based on project characteristics, ecology of relevant fisheries species, fisheries management objectives, and any local restoration priorities.
- This includes a review of readily available online information including DFO fisheries management plans and other documents as required
- Description and rationale for how the proposed project meets the following 4 Principles of the FPIP:
  - **Principle 1:** Offsetting measures must support fisheries management objectives or local restoration priorities.
    - o Rationale:
  - **Principle 2:** Benefits from offsetting measures must balance Project impacts.
    - o Rationale:
  - **Principle 3:** Offsetting measures must provide additional benefits to the fishery.
    - o Rationale:
  - **Principle 4:** Offsetting measures must generate self-sustaining benefits over the long-term.
    - o Rationale:

### Post Construction Monitoring Plan

- An as-built survey will be provided to document and confirm the size of the created habitat, following construction.
- VFPA will ensure that post-construction monitoring is undertaken in accordance with standard DFO requirements to confirm that created fish habitats are functioning as intended.
- A Post-Construction Monitoring Plan for the Habitat Enhancement Program has been created to outline monitoring requirements for habitat banking project sites.
- Monitoring will include assessments of site stability, proper physical function, planting success, and achievement of the desired biological objectives.
- VFPA to provide an estimate of predicted time for the vegetation at the site to become well established

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#### Attachments

- *Design Drawings (attachment)*

Signed on behalf of Vancouver Fraser Port Authority:

Habitat Enhancement Program  
Vancouver Fraser Port Authority

Date: \_\_\_\_\_

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## ANNEX C

### HABITAT CREDIT LEDGER

The following template shall be used to record and track the credits associated with each Habitat Banking Project that has been deposited in the Habitat Bank. The completed Habitat Credit Ledger will be submitted to DFO at the following frequency:

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- with each Annual Report; and
- following a transaction in the Habitat Bank (withdrawal or deposit of credits).

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## **ANNEX D**

### **FORM OF PROGRESS REPORTS**

The following reports will be used to document and communicate the status of the Habitat Bank on an annual basis:

- Annual Report for VFPA's Habitat Bank; and
- Annual Habitat Monitoring Report for VFPA's Habitat Bank.

Each report will be submitted to DFO on annual basis and shall include the detail as provided in the following Outline of Content.

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<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<b><u>SECTION</u></b>	<b><u>CONTENT</u></b>
<b>1. Table of Contents</b>	
<b>2. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>3. Executive Summary</b>	<ul style="list-style-type: none"> <li>• Identification of purpose of Annual Report</li> <li>• Statement of commitment between Participants for a working relationship built on trust, accountability and information sharing</li> <li>• Overview of annual transactions and current credits</li> </ul>
<b>4. Introduction</b>	<ul style="list-style-type: none"> <li>• Background on the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>5. Administration of the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Tracking processes and responsibilities</li> <li>• Activities started/completed in Reporting Period</li> <li>• Annual Review</li> <li>• VFPA and DFO Liaison Activities</li> <li>• Achievements in Reporting Period</li> </ul>
<b>6. Credits in the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Summary of the credits in the Habitat Bank and the transaction that were performed in the reporting year</li> </ul>
<b>7. General Ledger</b>	<ul style="list-style-type: none"> <li>• Overview of the General Ledger</li> </ul>
<b>8. Habitat Balance Sheet</b>	<ul style="list-style-type: none"> <li>• Overview of the Habitat Balance Sheet</li> </ul>
<b>9. Anticipated Program for 20XX [Next Year]</b>	<ul style="list-style-type: none"> <li>• Projects Currently under Construction</li> <li>• Priority Projects for 20XX</li> </ul>
<b>10. Management Issues and Opportunities</b>	<ul style="list-style-type: none"> <li>• Challenges and issues encountered</li> <li>• Obstacles</li> <li>• Potential remedial measures for implementation next year</li> </ul>
<b>11. Indigenous Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of Indigenous engagement activities performed within the reporting year on <u>Habitat Banking Projects</u></li> </ul>

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<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>12. Public and Key Stakeholder Engagement Activities</b>	<ul style="list-style-type: none"> <li>Summary of public and key stakeholder engagement activities performed within the reporting year on <u>Habitat Banking Projects</u></li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Summary of VFPA and DFO Meetings in the Reporting Year
Appendix B	As-Built Reports
Appendix C	Credit Transaction Reports
Appendix D	Map of Sites in the Habitat Bank
Appendix E	General Ledger
Appendix F	Habitat Balance Sheet
Appendix G	Map of Sites Proposed for Next Year

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Summary of public and key stakeholder engagement activities performed within the reporting year on conservation projects

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<b><u>ANNUAL HABITAT MONITORING REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>1. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>2. Introduction</b>	<ul style="list-style-type: none"> <li>• Background of the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>3. Types of Monitoring</b>	<ul style="list-style-type: none"> <li>• Description of the various types of monitoring that is used for the administration of the Habitat Bank</li> </ul>
<b>4. 20XX Monitoring Results</b>	<ul style="list-style-type: none"> <li>• Overview of monitoring results for each <u>Habitat Banking Project</u> (Detailed reports are included in Appendix A)</li> </ul>
<b>5. Next Year's Habitat Monitoring Report</b>	<ul style="list-style-type: none"> <li>• Overview of next year's anticipated habitat monitoring</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	<u>Habitat Banking Project Monitoring Reports</u>
Appendix B	Monitoring Status and Proposed Monitoring Schedule

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## ANNEX E

### EXISTING PROJECTS

The Habitat Banking Projects that are identified herein represent the status of the Habitat Bank and projects planned for the Habitat Bank as of the Effective Date of this Arrangement.

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Table 1 – Habitat Banking Projects currently deposited in the Habitat Bank

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Table 2 – Habitat Banking Projects that have been proposed by VFPA and accepted by DFO as appropriate for development and deposit into the Habitat Bank

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**Table 1.0 – Habitat Banking Projects Deposited to VFPA Habitat Bank**

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No.	SITE	LOCATION	BANKED AREA (m <sup>2</sup> )	STATUS
1.	Salt Marsh Restoration – TFN (3.1 & 3.2)	Delta (Tsawwassen)	6,635 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
2.	Salt Marsh Restoration - Boundary Bay (3.3, 3.4 & 3.5)	Delta (Boundary Bay)	56,357 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
3.	Glenrose Tidal Marsh	Delta	10,778 m <sup>2</sup> (tidal freshwater marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
4.	Riverfront Park Tidal Marsh	Vancouver	1,481 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
5.	Gladstone Park Tidal Marsh	Vancouver	3,181 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
6.	Timberland Basin Habitat	Surrey	1,146 m <sup>2</sup> / 2,777 m <sup>2</sup> (tidal freshwater marsh / tidal freshwater mudflat)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
7.	New Brighton Park Shoreline Habitat Restoration Project	Vancouver	9,872 m <sup>2</sup> (salt marsh, marine tidal channel & mudflat, cobble/boulder beach, and marine riparian)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>

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**Table 2.0 – Habitat Banking Projects Proposed by VFPA and accepted by DFO as appropriate for the Habitat Bank**

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No.	SITE	LOCATION	APPROX. GROSS AREA (ha.)	STATUS
1.	Cates Landing Habitat Restoration	North Vancouver	~1.0 ha	• Complete
2.	Maplewood Marine Restoration Project	North Vancouver	~7.0 ha	• Permitting and approvals in progress
3.	Tsawwassen Eelgrass Project	Delta	~4.3 ha	• Permitting and approvals in progress
4.	South Arm Jetty Tidal Marsh Project	Richmond	~44.0 ha	• Permitting and approvals in progress
5.	Westham Island / Canoe Pass Tidal Marsh Project	Ladner	~4.0 ha	• Permitting and approvals in progress
6.	McDonald Tidal Marsh Project	Richmond	~2.8 ha	• Permitting and approvals in progress
7.	Point Grey Tidal Marsh Project	Vancouver	~41.0 ha	• To be advanced in future years
8.	Steveston Island Tidal Marsh Project	Richmond (Steveston)	~6.5 ha	• To be advanced in future years

Draft: February 13, 2019

Deleted: VFPA proposed changes dated August 14, 2018

## ANNEX F

### INDIGENOUS CONSULTATION AND ENGAGEMENT: USE OF HABITAT CREDITS TO MEET OFFSETTING REQUIREMENTS OF A *FISHERIES ACT* AUTHORIZATION

Consultation with Indigenous peoples is required when Fisheries and Oceans Canada (DFO) makes a regulatory decision that may adversely impact potential or established Aboriginal or treaty rights, Indigenous groups and their related interests. Under the fisheries protection provisions of the *Fisheries Act*, a regulatory decision occurs when DFO contemplates the decision to authorize a work, undertaking or activity under section 35(2)(b) of the *Fisheries Act*. Indigenous consultation will normally take place after DFO has received an Application for Authorization and determined that the information requirements set out in the *Applications for Authorization* under Paragraph 35(2)(b) of the *Fisheries Act Regulations* have been met.

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DFO will consult on the work, undertaking or activity being authorized under section 35(2)(b) of the *Fisheries Act* and any other aspects of the Authorization that have the potential to adversely impact potential or established Aboriginal or treaty rights, and related interests. The goal of these consultations will be to identify measures to avoid, minimise, or if required accommodate for, potential impacts of the work, undertaking or activity on the rights or interests of Indigenous peoples through mitigation and offsetting to be incorporated into the Authorization.

As the purpose of utilizing habitat banking credits is to meet offsetting requirements of an Authorization issued under section 35(2)(b) of the *Fisheries Act*, the proposed use of habitat banking credits is subject to Indigenous consultation.



Draft: February 13, 2019

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## ANNEX G

### INDIGENOUS CONSULTATION AND ENGAGEMENT: HABITAT BANKING PROJECT DEVELOPMENT BY HEP

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#### Overview and Purpose

Indigenous consultation and engagement is a key element for the successful delivery of Habitat Banking Projects undertaken by VFPA's Habitat Enhancement Program (HEP). This Annex describes the process implemented by HEP for developing Habitat Banking Projects and identifies key points during the process for input and involvement by Indigenous groups. HEP's consultation and engagement with Indigenous groups aims to identify and address project-related impacts, to design and implement appropriate mitigation measures, and to explore opportunities for Indigenous involvement such as participation in field studies and/or employment, training and contracting. Subject to the discretion and direction of applicable regulatory agencies, including VFPA, HEP also aims to undertake consultation with Indigenous groups in accordance with the requirements of regulatory processes that are applicable to the Habitat Banking Project (such as VFPA's Project and Environmental Review Process).

**Deleted:** habitat creation and enhancement (conservation) projects

**Deleted:** conservation projects

**Deleted:** conservation project

Draft: February 13, 2019

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## Habitat Banking Project Development Process

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The development of Habitat Banking Projects is achieved through six basic project management phases that are used to guide and control the project from start to finish.

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Commencing with the identification of a potential project, the process provides for the structured development and advancement of all required components required for project delivery.

- Phase 1 (**Project Identification**) – The “idea” or the vision of what could be achieved.
- Phase 2 (**Project Definition**) – What are the project objectives? Constraints?
- Phase 3 (**Design Development**) – How will the project objectives be achieved?
- Phase 4 (**Permitting and Approvals**) – Obtaining formal permission to perform the work.
- Phase 5 (**Implementation/Construction**) – Construction of the habitat project.
- Phase 6 (**Post Construction**) – Ensuring long-term success of the habitat project.

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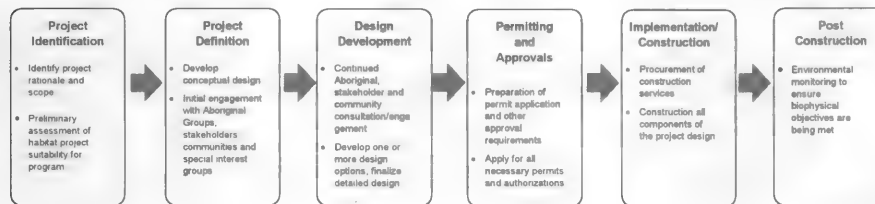
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The illustration below depicts these six key project management phases and provides the key tasks associated with each.

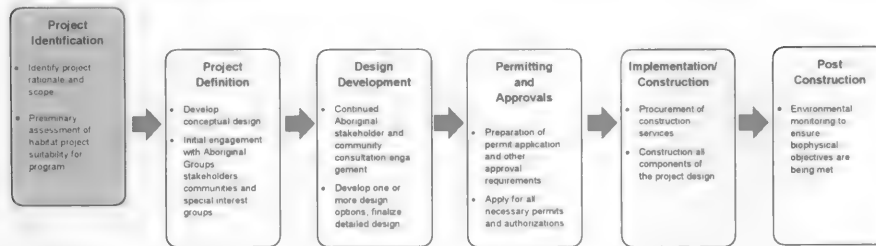


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## Phase I - Habitat Banking Project Identification

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The identification of potential Habitat Banking Projects is a critical component of the project delivery process. Considerations include habitat need, habitat productivity, feasibility, cost, land tenure, DFO confirmation and Indigenous matters.

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### Indigenous Consultation and Engagement

- *HEP seeks input from Indigenous groups on identification of potential habitat enhancement sites*
- *HEP seeks input from Indigenous groups on Habitat Banking Projects identified by others*
- *Indigenous groups share available traditional knowledge, information and studies*

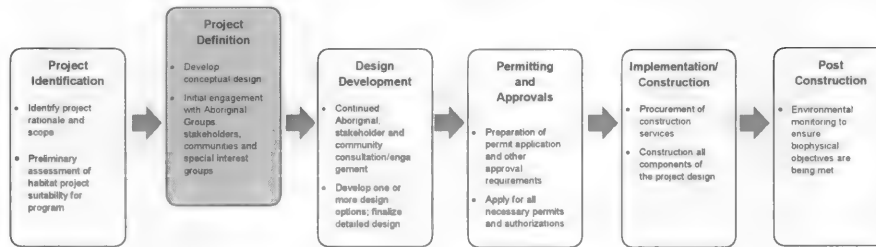
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## Phase 2 - Habitat Banking Project Definition

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The development of conceptual designs is key in defining what a Habitat Banking Project could include. Using these concept designs, initial engagement and consultation on specific project features can commence.

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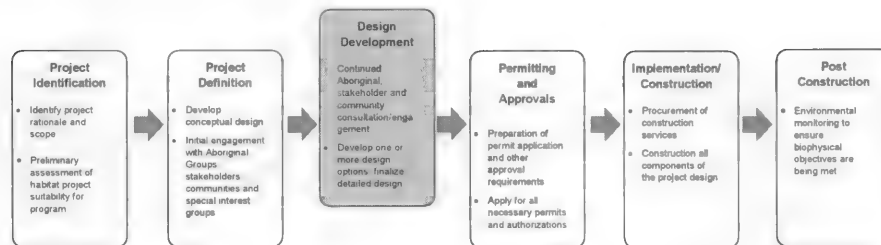
### Indigenous Consultation and Engagement

- HEP consults Indigenous groups on preferred engagement activities for project (e.g. Aboriginal Technical Design Committee)
- HEP consults Indigenous groups on project concept
- HEP identifies potential habitat values (i.e. credit estimates) that could be created and engages with interested Indigenous Groups
- Indigenous groups share Traditional Knowledge with HEP
- HEP identifies opportunity for involving Indigenous groups in field studies and assessments
- HEP commences planning for Indigenous involvement throughout project (e.g. contracting, employment and training opportunities)

Draft: February 13, 2019

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### Phase 3 - Design Development



In the design phase, one or more designs are developed and evaluated. Through an iterative design process, a final design is selected and is refined to include all details necessary for construction.

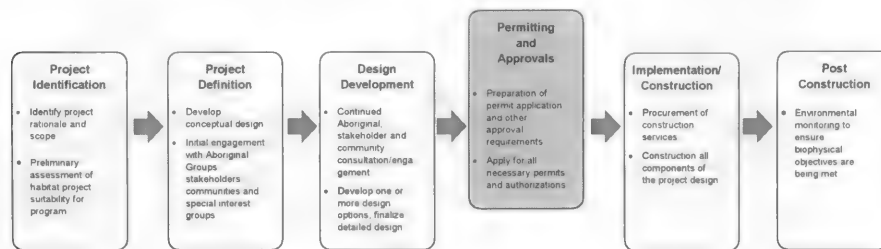
#### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on the design options*
- *HEP considers Indigenous feedback and refines design of project where appropriate (including selection of plant species)*
- *Where required, HEP undertakes further consultation with Indigenous groups on the design*
- *HEP finalizes the design*
- *HEP shares final design with Indigenous groups*
- *HEP confirms habitat values (i.e. credits) and consults with Indigenous groups*
- *HEP obtains DFO confirmation of appropriateness of habitat project for the Habitat Enhancement Program*
- *HEP plans for continued Indigenous involvement in subsequent phases*

Draft: February 13, 2019

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## Phase 4 - Permitting and Approvals



Permits and approvals that are required must be addressed on a project-by-project basis as regulatory requirements and land ownership can vary significantly.

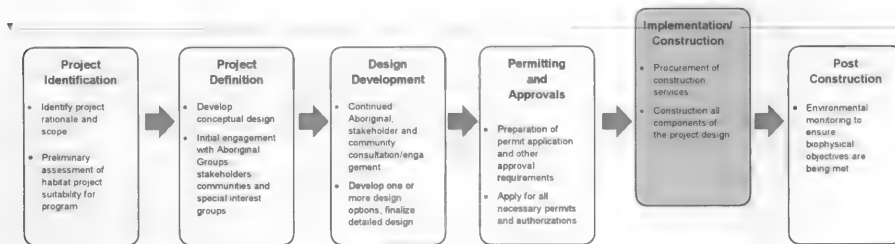
### Indigenous Consultation and Engagement

- *HEP engages with Indigenous groups in relation to permits and approvals*
- *HEP develops a summary of permits and approvals required and shares with Indigenous groups*
- *HEP seeks Indigenous input and support on permit applications*
- *HEP notifies Indigenous groups on submission of permit applications*
- *Regulators and permitting authorities may undertake Indigenous consultation*
- *HEP plans for continued Indigenous involvement in subsequent phases*

Draft: February 13, 2019

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## Phase 5 - Implementation/Construction



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The Habitat Banking Project takes shape during the Implementation/Construction Phase.

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### Indigenous Consultation and Engagement

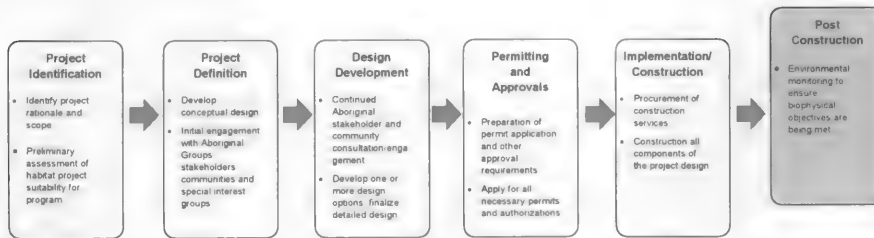
- HEP identifies approach to procurement and determines opportunities for Indigenous involvement/benefits
- HEP monitors conditions of approval/permits and any commitments to Indigenous groups
- HEP continues to keep Indigenous groups updated on progress of construction (e.g. sharing of construction monitoring reports)
- HEP plans for continued Indigenous involvement in Post Construction Phase

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Draft: February 13, 2019

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## Phase 6 - Post Construction



### Indigenous Consultation and Engagement

- HEP considers opportunities for enhanced integration of Indigenous input and identification of priorities into planning for post construction monitoring
- HEP shares Post Construction Monitoring Plan with Indigenous groups
- Potential contracting opportunities for Indigenous groups (e.g. maintenance, monitoring)
- HEP explores opportunities for enhanced sharing of information (e.g. data collection such as potential DNA analysis, fish use data etc.)
- HEP engages Indigenous groups regarding other types of reporting that the HEP can share that communicates project benefits and information of importance to Indigenous communities

**Commented [OC1]:** The yellow text on this page (page 36) and page 35 is new text that has been added as a result of input received from Indigenous groups during fall 2018 consultation efforts.



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## Thorpe, Suzanne

---

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Wednesday, February 20, 2019 1:34 PM  
**To:** Nutton, Byron; Thorpe, Suzanne  
**Cc:** Ruffo, Gord  
**Subject:** Thursday Feb 21 Call w VFPA - Agenda and Materials  
**Attachments:** 2019-02-21-03-600-VFPA-AGENDA-VFPA and DFO Liaison Meeting\_No 51-Rev0.docx; 2019-02-07-03-600-VFPA-HEP-DFO Meeting Actions-UPDATED FOR FEB 21-Rev0.docx

Hi Byron and Suzanne,

Ahead of our 10am call tomorrow, attached is:

1. Agenda to guide the call
2. Actions List – status of items updated following our last call on Feb 7<sup>th</sup>

Call number is in the Outlook invite, but just in case:

- +1-604-449-3026 (Vancouver)
- Attendee access code: [REDACTED]

Looking forward to speaking tomorrow!  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



s.16(2)(c)

**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)



## Meeting Agenda

### Habitat Enhancement Program

#### DFO / VFPA Liaison Meeting: Conference Call – February 2019

Meeting No. 51

**Location:** Conference Call (VFPA Vancouver Meeting Room)

**Date:** Thursday February 21th (10:00 AM– 11:00 AM)

**Attendees:**

Byron Nutton (DFO)  
Suzanne Thorpe (DFO)

Charlotte Olson (VFPA)  
Gord Ruffo (VFPA)

#### **AGENDA:**

1. Review of Agenda
2. Priority Actions & Timelines – to support Arrangement execution by March 2019
  - a) Status of IG Summary Report sent to IGs week of Feb 4<sup>th</sup>
  - b) Discuss status of Timeline to execute new Arrangement in Q1 2019
    - VFPA issued a current Arrangement draft to DFO for final review on Feb 13/19
    - Status of DFO review?
    - Confirm parties intent to have a sign-able document by March 8/19
      - DFO to respond with any final comments/edits on Feb 13 version by Feb 28 at the latest – critical path item
3. Other Items for Discussion
4. Next Steps/Actions

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pages 2011 to / à 2012**

## Thorpe, Suzanne

---

**From:** Nutton, Byron  
**Sent:** Wednesday, February 20, 2019 2:35 PM  
**To:** Thorpe, Suzanne  
**Subject:** RE: February 13 2019 version of VFPA-DFO Habitat Bank Arrangement - FOR DFO REVIEW

Thanks Suzanne.

I'll leave it with you to speak to those edits on our call tomorrow.

On a similar note, any further thinking about the best way to document habitat banking – specifically at this point I'm interested in concluding deliberations about whether or not the new Arrangement gets a new PATH number. I'm thinking probably yes, but welcome any thoughts you have to the contrary. The point being, that if it is "yes" you could go ahead and enter at least the tombstone data into PATH to generate that number, so we can provide it on the call tomorrow, so the PATH # can be updated on the cover page. I think the only twist to remember is that it should (probably) be entered as a new "Other Activity" instead of "Referral".

**From:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Sent:** 2019–February-20 1:00 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: February 13 2019 version of VFPA-DFO Habitat Bank Arrangement - FOR DFO REVIEW  
**Importance:** High

Byron;

I have reviewed the revised documents submitted by VFPA to DFO, date of draft: February 13, 2019.

I have no further comments and do not recommend any further substantive changes or edits.

---

If we want to be extremely picky – there are a couple of very minor edits that could be undertaken. I have highlighted these in RED and attached it to this email, per today's date/ \_STedits.

p.12 should be "will be" instead of "are/is" [for document consistency]

p.32 comma missing, p. 35. comma missing, p. 36 commas missing

Hope this is helpful. I'll let you decide whether or not to complete edits or leave it.

Suzanne

**From:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Sent:** Wednesday, February 13, 2019 3:40 PM  
**To:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>

**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>

**Subject:** RE: February 13 2019 version of VFPA-DFO Habitat Bank Arrangement - FOR DFO REVIEW

**Importance:** High

Good afternoon Byron

As discussed last week, VFPA is pleased to provide an updated February 2019 version of the draft VFPA-DFO Habitat Bank Arrangement for your review.

Of note:

1. The word document attached dated Feb 13/19 is the most current version of the Arrangement, which includes all edits and input provided by DFO to-date, including your email from Feb 1/19 and the notes below from our conference call on Feb 7/19. **Please ensure you/DFO use this attached Feb 13/19 draft for your final DFO reviews.**
2. The PDF attached is a comparison document (red-line version) that shows all the mark-ups/changes made between the previous version (Aug 14/18) and the current version (Feb 13/19).
3. [REDACTED]
4. All staff/position titles were updated as provided by DFO Feb 1/19, and also include recent updates to VFPA staff titles since the August 2018 version.
5. We also specifically updated Annex G (see yellow text shown on the PDF on page 35 & 36) to reflect input received from Indigenous groups in relation to VFPA's Indigenous consultation and engagement process. Note that this content is consistent with the commitments VFPA made in the Feb 1/19 final draft of the "Summary of Indigenous Engagement on VFPA's and DFO's Habitat Bank Arrangement" report.
6. The February Arrangement version attached also includes a detailed quality review/edit of minor grammatical errors, formatting, and removal of all "Note to Draft (NTD)" highlights/comments – no other material changes were made.

Please review. Our next call with you on this is Thursday Feb 21, and we look forward to finalizing a final sign-able document in the coming few weeks!

Regards,

s.19(1)

s.21(1)(a)

s.21(1)(b)

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

**From:** Olson, Charlotte

**Sent:** Friday, February 08, 2019 12:40 PM

**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; 'Thorpe, Suzanne' <Suzanne.Thorpe@dfo-mpo.gc.ca>

**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>; [REDACTED]

**Subject:** RE: Thursday Feb 7 Call w VFPA - Actions and Follow Up

Hi Byron and Suzanne, thanks for the call yesterday

Please find attached the updated Actions list from Feb 7/19.

Suzanne, please note that [REDACTED] VFPA will provide the IG notification records that you asked for (see item #5 on actions list), [REDACTED]

Also, [REDACTED]

VFPA will include these items as discussed with DFO, within our next Arrangement version:

1. Keep the proposed term as 15yrs in the February 2019 Arrangement draft
2. Cheryl Webb is still the signatory (as of right now)
3. DFO's response to the VFPA "NTD" question in Section 12 was simply that the template had this review section included. DFO did offer that the template had the wording "**may** review" rather than our current draft that has "**will** review". [REDACTED]
4. DFO's response to the "NTD" comment in Annex F was that the following legislation title should be italicized, otherwise they confirmed that the reference is correct:  
"Indigenous consultation will normally take place after DFO has received an Application for Authorization and determined that the information requirements set out in the *Applications for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations*"

As discussed, I expect to get the February 2019 version of the Arrangement back to you by Feb 15 (next Friday) at the latest. We are getting close!

[REDACTED]

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

s.19(1)

s.21(1)(a)

s.21(1)(b)



## Meeting Agenda

### Habitat Enhancement Program

#### DFO / VFPA Liaison Meeting: Conference Call – February 2019

Meeting No. 51

**Location:** Conference Call (VFPA Vancouver Meeting Room)

**Date:** Thursday February 21th (10:00 AM– 11:00 AM)

**Attendees:**

Byron Nutton (DFO)  
Suzanne Thorpe (DFO)

Charlotte Olson (VFPA)  
Gord Ruffo (VFPA)

#### **AGENDA:**

- 1. Review of Agenda**
- 2. Priority Actions & Timelines – to support Arrangement execution by March 2019**
  - a) Status of IG Summary Report sent to IGs week of Feb 4<sup>th</sup>
  - b) Discuss status of Timeline to execute new Arrangement in Q1 2019
    - VFPA issued a current Arrangement draft to DFO for final review on Feb 13/19
    - Status of DFO review?
    - Confirm parties intent to have a sign-able document by March 8/19
      - DFO to respond with any final comments/edits on Feb 13 version by Feb 28 at the latest – critical path item
- 3. Other Items for Discussion**
- 4. Next Steps/Actions**



**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**
**DATE:** February 21, 2019 (10am-11:00am)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING –** February 28 (1pm Conference Call)

**ATTENDEES:**
**DFO Representatives:**

Byron Nutton (BN), DFO  
Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO)

**CURRENT MEETING ACTIONS (STATUS – updated before Feb 28/19 Call):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
<b>2019 Actions:</b>				
1.	Byron to reach out to [REDACTED] (TWN) regarding DFO's required 'close-out' related to engagement on VFPA-DFO Arrangement	DFO (BN)	Per Byron (In Progress)	BN reached out [REDACTED] the week of Feb 19 BN to provide update to VFPA on Feb 28 call
2.	DFO and VFPA are committed to working toward a FINAL Arrangement, ready for signatures by March 8/19 at the latest	VFPA (CO) DFO (BN)	Feb 28/19	VFPA issued DFO a final draft version of the Arrangement Feb 13/19 DFO sent edits to VFPA on Feb 21/19, which VFPA incorporated into a final Arrangement and sent back to VFPA on Feb 26/19 Following call with DFO on Feb 28/19, and pending no other comments from DFO Management, VFPA will proceed with Executive review/signature commencing March 1
3.	VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)	VFPA (CO)	Week of Feb 25 target	VFPA is targeting week of Feb 25 <sup>th</sup> for this submittal. VFPA is currently working with TWN to prepare a joint submission to DFO on this aspect. The submittal will include the MMRP Project Confirmation Document, as well as the MMRP Assisted Assessment.

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
4.	VFPA to provide DFO (ST) record of the distribution of 1) Meeting Summary Notes; and 2) IG Summary Report	JS	Feb 22 (Complete)	VFPA sent records to DFO as requested on Feb 22/19 (6 example email records were provided, covering the 3 Information Sessions)

No information has been removed or severed from this page

## Hwang, Jason

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**From:** Hwang, Jason  
**Sent:** February-21-19 1:12 PM  
**To:** Nutton, Byron  
**Subject:** RE: VFPA Habitat bank - DRAFT BN v2

Thanks for sending this. I am not quite sure what to do at this point – I am seeking your advice. I think I want to get a final signoff package asap and get that to Brad for his approval and then on to Cheryl. I don't think there is value in sending Brad a draft – he is trusting us to get him a final product we are happy with. If you agree with this, can you get me a final asap – with all the things in yellow addressed? Or I can call you to discuss if that is better. Let me know what you think.

Jason

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** February-20-19 5:32 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA Habitat bank - DRAFT BN v2

Hi Jason

I have updated the DRAFT Briefing Note. I re-wrote Strategic Considerations, removed Science Advice and Interdepartmental Consultations, and made a few other minor revisions/edits. You will note that there are still two sections high-lighted yellow related to Indigenous consultations that need to be confirmed.

I have attached this latest draft of the Briefing Note, the current draft of the Arrangement (same as provided on Monday – still a few items to tidy up) and the Indigenous engagement summary report (not previously provided to you). I suspect it would be appropriate to send these versions to Brad for his consideration before the final-final versions are sent to Cheryl for signature. If you do so, please include confirmation regarding Brad's previous questions: 1) the template Arrangement included in the guidance document has the RD (as opposed to the RDG) as the signatory; and 2) Policy confirmed that there is no requirement for, and they have no capacity to support, a broader Regional review.

Suzanne has completed a review of the most recent version of the Arrangement provided on Thursday and identified a couple minor editorial items, but it appears that our comments have all been incorporated. We have our regularly scheduled call with VFPA tomorrow morning to go over things confirm any outstanding items (e.g. any additional Indigenous feedback they may have received). I will update you after that.

Cheers,

Byron

---

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** 2019–February-18 10:24 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA Habitat bank - DRAFT BN

I would not add too much to the content you have provided. Under strategic considerations you might mention that we have had a habitat banking arrangement with the port for xxx years, and that the port and DFO have found the arrangement beneficial. And perhaps also add that significant effort has been invested in updating this long standing

agreement. Lastly, you could emphasise that the agreement provides for review every 5 years, so it can be renewed or updated should we find something we want to adjust.

---

**From:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>

**Sent:** February-18-19 7:51 AM

**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>

**Subject:** VFPA Habitat bank - DRAFT BN

**Importance:** High

Hey Jason,

Please see attached:

- DRAFT BN for RD sign-off. Some work still needed, but I would appreciate your feedback on the content overall – particularly the type of information I should be including in “Strategic considerations”
- DRAFT Arrangement – latest draft, just received on Thursday – Suzanne and I will be reviewing and discussing in the next couple days prior to our regularly scheduled bi-weekly call with VFPA on Thursday.

I still have a couple actions outstanding:

- Final follow-up on any additional Indigenous concerns – tomorrow when I’m in the office.
- Final follow-up with Policy on regional review process – will watch for something from them on my BB today.

Cheers,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices

Fisheries Protection Program | Programme de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

250-618-4268

## Thorpe, Suzanne

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**From:** Nutton, Byron  
**Sent:** Thursday, February 21, 2019 1:26 PM  
**To:** Thorpe, Suzanne  
**Subject:** FW: VFPA Habitat bank - DRAFT BN v2  
**Attachments:** 2019-02-20\_VFPA\_HBA\_BN\_for\_Decision\_DRAFT.docx; 2019-02-13 VFPA proposed changes to Habitat Bank Arrangement.docx; 2019-02-01 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev0-FINAL DRAFT.pdf

**From:** Nutton, Byron  
**Sent:** 2019-February-20 5:32 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA Habitat bank - DRAFT BN v2

Hi Jason

I have updated the DRAFT Briefing Note. I re-wrote Strategic Considerations, removed Science Advice and Interdepartmental Consultations, and made a few other minor revisions/edits. You will note that there are still two sections high-lighted yellow related to Indigenous consultations that need to be confirmed.

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Suzanne has completed a review of the most recent version of the Arrangement provided on Thursday and identified a couple minor editorial items, but it appears that our comments have all been incorporated. We have our regularly scheduled call with VFPA tomorrow morning to go over things confirm any outstanding items (e.g. any additional Indigenous feedback they may have received). I will update you after that.

Cheers,

Byron

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** 2019-February-18 10:24 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA Habitat bank - DRAFT BN

I would not add too much to the content you have provided. Under strategic considerations you might mention that we have had a habitat banking arrangement with the port for xxx years, and that the port and DFO have found the arrangement beneficial. And perhaps also add that significant effort has been invested in updating this long standing agreement. Lastly, you could emphasise that the agreement provides for review every 5 years, so it can be renewed or updated should we find something we want to adjust.

**From:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Sent:** February-18-19 7:51 AM  
**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Subject:** VFPA Habitat bank - DRAFT BN  
**Importance:** High

Hey Jason,

Please see attached:

- DRAFT BN for RD sign-off. Some work still needed, but I would appreciate your feedback on the content overall – particularly the type of information I should be including in “Strategic considerations”
- DRAFT Arrangement – latest draft, just received on Thursday – Suzanne and I will be reviewing and discussing in the next couple days prior to our regularly scheduled bi-weekly call with VFPA on Thursday.

I still have a couple actions outstanding:

- Final follow-up on any additional Indigenous concerns – tomorrow when I’m in the office.
- Final follow-up with Policy on regional review process – will watch for something from them on my BB today.

Cheers,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

**Pages 2328 to / à 2332  
are duplicates of  
sont des duplicatas des  
pages 2193 to / à 2197**

**Pages 2333 to / à 2368  
are duplicates of  
sont des duplicatas des  
pages 2157 to / à 2192**



**Pages 2369 to / à 2383  
are duplicates of  
sont des duplicatas des  
pages 1693 to / à 1707**

## Thorpe, Suzanne

---

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Thursday, February 21, 2019 4:40 PM  
**To:** Nutton, Byron; Thorpe, Suzanne; Ruffo, Gord  
**Subject:** RE: Thursday Feb 21 Call w VFPA - Actions  
**Attachments:** 2019-02-21-03-600-VFPA-HEP-DFO Meeting Actions-Rev0.docx

Hi all, thanks for the call this morning, attached is the updated Actions list from today.  
Our next call is Thursday Feb 28<sup>th</sup> (1pm) – looking forward to receiving DFO's final edits, file path #, and Section 4 (scope) sentence by then if possible please.

Thanks guys!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

**From:** Olson, Charlotte  
**Sent:** Wednesday, February 20, 2019 1:34 PM  
**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; 'Thorpe, Suzanne' <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Cc:** Ruffo, Gord <Gord.Ruffo@portvancouver.com>  
**Subject:** Thursday Feb 21 Call w VFPA - Agenda and Materials

Hi Byron and Suzanne,  
Ahead of our 10am call tomorrow, attached is:

1. Agenda to guide the call
2. Actions List – status of items updated following our last call on Feb 7<sup>th</sup>

Call number is in the Outlook invite, but just in case:

s.16(2)(c)

- +1-604-449-3026 (Vancouver)
- Attendee access code [REDACTED]

Looking forward to speaking tomorrow!  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**
**DATE:** February 21, 2019 (10am-11:00am)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING – February 28 (1pm Conference Call)**
**ATTENDEES:**
**DFO Representatives:**

Byron Nutton (BN), DFO  
Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO)

**CURRENT MEETING ACTIONS (STATUS – updated after Feb 21/19 Call):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
<b>2019 Actions:</b>				
1.	Byron to reach out to [REDACTED] (TWN) regarding DFO's required 'close-out' related to engagement on VFPA-DFO Arrangement	DFO (BN)	Per Byron (In Progress)	BN reached out [REDACTED] the week of Feb 19
2.	DFO and VFPA are committed to working toward a FINAL Arrangement, ready for signatures by March 8/19 at the latest	VFPA (CO) DFO (BN)	Feb 28/19	VFPA issued DFO a final draft version of the Arrangement Feb 13/19 <b>DFO to respond to VFPA with: any final edits, comments, Path # (front page), and Section 4 sentence/edits by Feb 28 at latest pls.</b> VFPA will then aim to issue a final sign-able document the first week in March.
3.	VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)	VFPA (CO)	Week of Feb 25 target	VFPA is targeting week of Feb 25 <sup>th</sup> for this submittal. VFPA is currently working with TWN to prepare a joint submission to DFO on this aspect. The submittal will include the MMRP Project Confirmation Document, as well as the MMRP Assisted Assessment.

s.19(1)

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
4.	VFPA to provide DFO (ST) record of the distribution of 1) Meeting Summary Notes; and 2) IG Summary Report	JS	Feb 22	Jemma Scoble will provide this record [REDACTED]

s.19(1)

No further information has been removed or severed from this page

**From:** [Nutton, Byron](#)  
**To:** [Olson, Charlotte](#) <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)> ([Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com))  
**Cc:** [Thorpe, Suzanne](#)  
**Subject:** Habitat Bank - Feb 21 minor edits  
**Date:** 2019-February-21 5:07:00 PM  
**Attachments:** [2019-02-21 VFPA proposed changes to Habitat Bank Arrangement\\_DFOedits.docx](#)

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Hi Charlotte,

I did follow-up with Jason after our call this morning to remind him of our timelines. I expect to hear back from him by early next week regarding any final comments from our management and I will be sure to let you know as soon as I do.

In the meantime, as discussed, please find the attached document with some minor editorial comments and suggested modified wording for Section 4, all high-lighted in red and listed below for easy reference:

Cover page (and subsequent pages) – updated the date in the header.  
Cover page – added PATH file #  
Page 3, section 3, bullet 3 – corrected document title and removed (“Guide”) as it really isn’t needed  
Page 4, section 4 – suggested wording as discussed  
Page 12 – one missing comma and a couple of changes to the tense for consistency  
Pages 12, 32, 33, 35, 36 – several missing commas behind i.e. and e.g. – my sense is that the convention could go either way, but it should be consistent and it looks like most instances include the comma so easier to add a couple more

Lastly, for now at least...

With respect to logistics of sign-off I’m expecting that we will both send the final-final up through our respective organizations with all the appropriate final briefings at the same time, but that I will advise my management to not sign the copy I forward and instead be prepared to sign the copy with original VFPA signatures, which you will deliver to our office once it is through your shop. Please let me know if that sounds right to you or if you have other expectations.

Cheers,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

Draft: February 21, 2019

**Habitat Bank Arrangement:**

**PORT OF VANCOUVER HABITAT BANK**

Between

**VANCOUVER FRASER PORT AUTHORITY**

AND

**HER MAJESTY THE QUEEN IN RIGHT OF CANADA**, as represented by the Minister of  
Fisheries and Oceans on behalf of Fisheries and Oceans Canada ("DFO")

●xxxxxx, 2019

**PATH Number: 19-HPAC-000125**

Draft: February 11, 2019

## 1. INTRODUCTION

This document sets out the principles of the mutual understanding between **Vancouver Fraser Port Authority** (“VFPA”) and Fisheries and Oceans Canada (“DFO”) (hereafter referred to as “the Participants”) for the **Port of Vancouver Habitat Bank** (“Habitat Bank”).

### WHEREAS:

- a. Fisheries and Oceans Canada (DFO) is responsible for the administration of the *Fisheries Act*, more specifically the fisheries protection provisions including sections 6, 20, 21, 35, 37, and 38 related to the conservation and protection of Canada's marine and freshwater fisheries resources and their habitats from the impact of human activities. The purpose of the fisheries protection provisions, as set out in section 6.1 of the *Fisheries Act*, is to provide for the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries;
- b. DFO is responsible for the administration of the *Species at Risk Act* ("SARA") with respect to aquatic species other than those individuals in or on federal lands administered by the Parks Canada Agency and, in that capacity, the Minister of Fisheries and Oceans has powers and duties with respect to protecting aquatic species listed under that Act and providing for their recovery;
- c. The Fisheries Protection Policy Statement's goal is to promote compliance with the *Fisheries Act* in order to contribute to the purpose set out in section 6.1 of the *Fisheries Act*;
- d. This Arrangement does not commit DFO to the authorization of any future work, undertaking or activity requiring an authorization under paragraph 35(2)(b) of the *Fisheries Act*, or permit any future project requiring a permit under sections 73 and 74 of the *Species at Risk Act*. All future projects will be reviewed on their own merit and a decision on whether to authorize or permit will be made independent of the existence of a habitat bank arrangement. This Arrangement, and any related communications between DFO and VFPA do not constitute a representation or commitment of any kind regarding authorization of any future projects by DFO. This Arrangement, and any related communications, moreover does not constitute a commitment that any habitat credits that may be issued will be acceptable in the context of future applications for *Fisheries Act* authorizations or SARA permits.
- e. VFPA is a port authority established by the Government of Canada pursuant to the *Canada Marine Act* and is accountable to the federal Minister of Transport. VFPA has a mandate to facilitate Canada's trade objectives, ensuring goods are moved safely, while protecting the environment and considering local communities. In fulfilling the mandate, VFPA carries out a variety of duties, including infrastructure development to support growth and efficient operations. The Habitat Bank can support such infrastructure development when habitat credits are acceptable in the context of future *Fisheries Act* authorizations or SARA permits.

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- f. The Participants entered into a Working Agreement dated July 31, 2012 ("Working Agreement") relating to the procedures for development and operation of a VFPA-led habitat bank for a five (5) year trial period which was extended by the Participants to March 31, 2019;
- g. VFPA has undertaken several habitat creation and enhancement projects in consultation with DFO pursuant to the Working Agreement, which are included in Annex E ("Existing Projects"); and
- h. This Arrangement will replace the Working Agreement and the Existing Projects will be managed pursuant to this Arrangement.

**THEREFORE**, the Participants agree to the following arrangement ("Arrangement").

## 2. PURPOSE

To support VFPA in fulfilling its mandate (referred to in paragraph e above) by facilitating infrastructure development when habitat credits from the Habitat Bank can be applied to meet future offsetting requirements for such development.

To replace the Working Agreement with this Arrangement and to establish revised principles for the continuation and management of the Habitat Bank by:

- establishing a working relationship between the Participants based on trust, accountability and information sharing;
- establishing a clear understandable Arrangement for managing the Habitat Bank; and
- increasing certainty in the administration of the Habitat Bank.

## 3. OTHER GENERAL INFORMATION

The activities carried out under this Arrangement will be consistent with:

- *Fisheries Protection Policy Statement* (2013);
- *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting* (2013);
- *Interim Fisheries Protection Program's Guide to Proponent-led Habitat Bank* (October, 2016) ("Guide");
- *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Bank* (October, 2016);
- any relevant Species at Risk Recovery Strategies and management considerations; and
- any relevant Fisheries Management Objectives.



Draft: February 21, 2019

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#### 4. SCOPE

The scope of this Arrangement is limited to the continuation and administration of the Habitat Bank described in Annex A, and including Habitat Banking Projects proposed in accordance with Annex B and the Existing Projects (described in Annex E). For the purposes of this Arrangement, a "Habitat Banking Project" shall mean a "conservation project" as defined in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking (October 2016)*.

#### 5. ROLES AND RESPONSIBILITIES

The roles and responsibilities of the VFPA are:

- Jointly managing the performance of the Arrangement with DFO;
- Identifying, designing, constructing, monitoring, maintaining, and protecting Habitat Banking Project sites;
- Meeting all other applicable federal, territorial, provincial and municipal requirements that apply to Habitat Banking Projects;
- Reporting on performance of Habitat Banking Projects;
- Accurately maintaining a copy of the habitat credit ledger; and
- Preparing and submitting Progress Reports for the Arrangement.

The roles and responsibilities of DFO are:

- Jointly managing the performance of the Arrangement with VFPA;
- Reviewing, providing advice and confirming Habitat Banking Project proposals;
- Reviewing Progress Reports, validating habitat credit balances in the habitat credit ledger, and processing habitat credit ledger transactions;
- Verifying the reported results of Habitat Banking Project performance in the Progress Reports;
- When appropriate, carrying out direct monitoring (i.e., a site visit to gather and analyse samples or information in order to directly verify compliance and effectiveness) and/or carrying out indirect monitoring (i.e., an assessment of information provided in Progress Reports to verify compliance and effectiveness) of Habitat Banking Project sites; and
- Reviewing and processing Progress Reports of the Arrangement.

The Participants shall fulfill their responsibilities under this Arrangement in accordance with the provisions of federal, provincial and territorial laws and regulations that govern their activities. Should a Participant not be able to perform a function under this Arrangement, the affected Participant will immediately contact the other signatories of this Arrangement so that early resolution can be reached.

Draft: February 21, 2019

## **6. MANAGEMENT PROVISIONS**

This Arrangement establishes the following management provisions for the administration of the Habitat Bank:

- The accountability lies with the office of signatories of the Arrangement: Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.
- The day to day administration of the Arrangement will be carried out by: Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region.

## **7. ADMINISTRATION OF THE HABITAT BANK ARRANGEMENT**

- Specific details related to the principles of the administration and operation of the Habitat Bank are included in Annex A;
- Habitat Banking Projects that are proposed for development are to be submitted for review and confirmation by DFO using the "Project Confirmation" template set out in Annex B;
- Habitat credits held within the Habitat Bank shall be tracked using the "Habitat Credit Ledger" template and frequency set out in and described in Annex C;
- Progress Reports shall be prepared and submitted annually in accordance with the requirements of Annex D;
- Existing Projects that were either constructed or proposed for construction under the terms of the Working Agreement are identified in Annex E; and
- Indigenous consultation and engagement related to the use of habitat credits is described in Annex F.

## **8. SHARING OF INFORMATION**

While this Arrangement is in effect and at all times thereafter, each of DFO and VFPA and any officers, employees or agents of each of them shall treat all information, data, documents, reports and materials acquired or to which access have been given in the course of, or incidental to, the performance of this Arrangement as confidential, subject to the federal *Access to Information Act* and the *Privacy Act*. With the exception of the Arrangement, the annexes to the Arrangement and annual Progress Reports, which VFPA may disclose from time to time, the Participants shall not disclose or permit to be disclosed such information, data, documents, reports and materials, unless:

- the Participants agree to the disclosure;
- the disclosure is part of the application and review process of VFPA's Project and Environmental Review for a proposed Habitat Banking Project, which would include disclosure of project-specific information, engagement information for

Draft: February 11, 2019

- public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of the application and review process by DFO for a proposed development project that would utilize habitat banking credits as offsetting, which would include disclosure of project-specific information, engagement information for public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of an application and review process of other regulatory agencies (such as Environment and Climate Change Canada for Disposal at Sea permit or exemption) for a proposed Habitat Banking Project, which would include disclosure only as required by such agencies;
- the disclosure relates to consultation and engagement with Indigenous groups as part of the Indigenous Consultation and Engagement Process set out in Annex G;
- the disclosure is to a third party as part of the Habitat Bank Administration as described in Annex A;
- the disclosure is required by law;
- the information was obtained from the public; or
- the information is available to the public.

## **9. CONSULTATION AND ENGAGEMENT**

The Participants will collaborate on an approach to meaningfully engage and consult with Indigenous groups having regard to the process being undertaken by VFPA's Habitat Enhancement Program for the development of Habitat Banking Projects and the involvement of Indigenous groups that is described in Annex G.

## **10. DIFFERENCES IN INTERPRETATION AND APPLICATION**

The Participants will endeavor to resolve issues regarding the implementation of this Arrangement in a timely manner using mechanisms available to the Participants. Where an issue remains unresolved, the pre-eminent jurisdiction responsible for the matter under consideration will make the final determination and seek concurrence from Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.

## **11. PROGRESS REPORTS**

The VFPA will prepare progress reports using the form described in Annex D ("Progress Report") on the achievements and challenges encountered during the reporting period of this Arrangement as it relates to the purposes identified in section 2 of this Arrangement.

The Progress Report should be submitted within ninety (90) calendar days from the conclusion of each year. A year will be considered to run from January 1 to December 31.

Draft: February 11, 2019

The Progress Report will be submitted to the Office of signatories of the Arrangement, Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region, for their concurrence.

All Progress Reports will conform to the requirements set out in Annex D.

## **12. REVIEW**

At the end of each five (5) year period during which this Arrangement is in effect, the Regional Director, Ecosystems Management, DFO Pacific Region, may establish a review team consisting of Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region, or an appropriately qualified and mutually agreed to third party to review the effectiveness of activities under this Arrangement. This review team will report to the Regional Director, Ecosystems Management, DFO Pacific Region, within six (6) months of being established.

## **13. AMENDMENT**

The Arrangement may be amended at any time in writing and by mutual consent of the Participants. An amendment will be confirmed by an exchange of letters, signed by the Participants, setting out the amendment and its effective date.

## **14. FINANCIAL ARRANGEMENT**

This Arrangement will not impose any additional financial responsibilities on the Participants, except that each Participant will be responsible for the staff and funding costs it incurs in its own interests, related to the support of the Arrangement.

## **15. DURATION, WITHDRAWAL AND TERMINATION**

This Arrangement is in effect from the date first written above for a period of fifteen (15) years. VFPA can request renewal of the Arrangement for an additional defined term (of no less than five (5) years) by providing one year's written notice to the other Participant. If this Arrangement is not renewed at the expiration of the term or a renewal, and provided that VFPA is not in breach of this Arrangement, the Participants will continue to apply the terms of this Arrangement to all Habitat Banking Projects that are either deposited in the Habitat Bank or have been confirmed by DFO in accordance with Annex B.

## **16. LEGAL DISCLAIMER**

This Arrangement is an expression of the mutual intentions of the Participants and is not legally binding or enforceable against them.

Draft: February 14, 2019

## **17. NOTICE**

All notices to be given under this Arrangement shall be in writing and shall be sent by prepaid registered mail or electronic transmission addressed to the Party entitled to receive the same, or delivered to such party as follows:

- if to VFPA:

Vancouver Fraser Port Authority (VFPA)  
100 The Pointe  
999 Canada Place  
Vancouver, British Columbia  
V6C 3T4

Attention: Director, Container Terminal Construction  
E-mail:

with a copy to:

Attention: Director, Legal Services  
E-mail:

- if to DFO:

Fisheries and Oceans Canada (DFO)  
Pacific Region, Ecosystems Management Branch  
Suite 200 – 401 Burrard Street  
Vancouver, BC  
V6C 3S4

Attention: Regional Director  
E-mail:

## **18. GENERAL**

VFPA is entering into this Arrangement on its own behalf and not as agent of Her Majesty in Right of Canada.

Draft: February 21, 2019

## **EFFECTIVE DATE AND SIGNATURE**

This Arrangement has been signed by the Regional Director of DFO Pacific Region of Fisheries and Oceans on behalf of Her Majesty the Queen in Right of Canada and by the VFPA on the dates noted below.

SIGNED IN THE PRESENCE OF:

FOR HER MAJESTY THE QUEEN IN RIGHT OF CANADA

\_\_\_\_\_  
Cheryl Webb  
Regional Director  
Ecosystems Management  
DFO Pacific Region

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

FOR VANCOUVER FRASER PORT AUTHORITY

\_\_\_\_\_  
Robin Silvester  
President and CEO

\_\_\_\_\_  
Witness (as to both)

\_\_\_\_\_  
Mark Gustafson  
Corporate Secretary

\_\_\_\_\_  
Date

This Arrangement comes into effect on the date that both Participants have signed above.

Draft: February 21, 2019

## **ANNEX A**

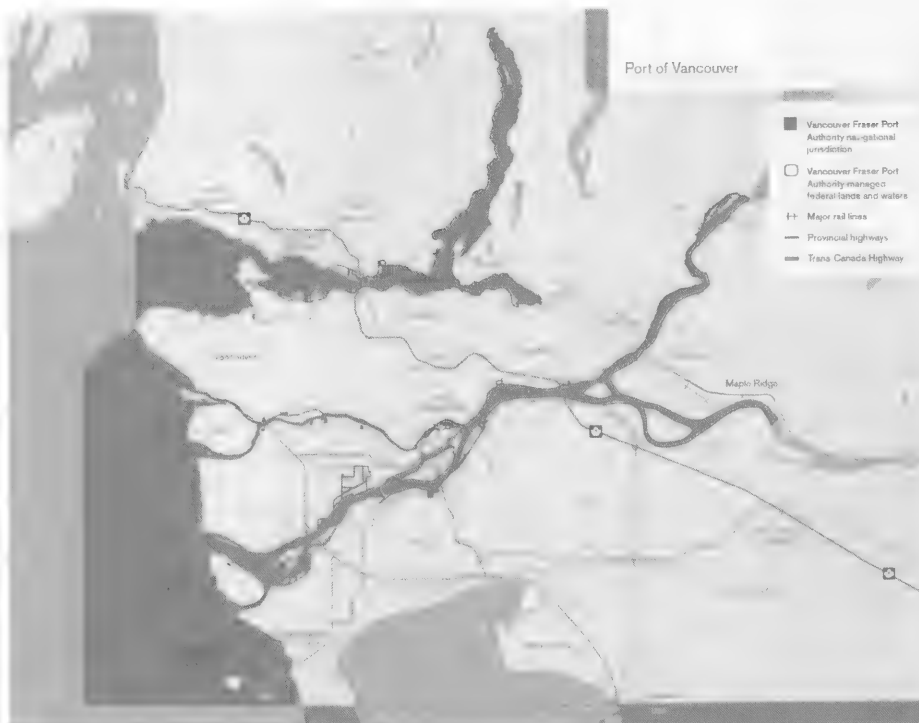
### **HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK**

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Draft: February 21, 2019

# ANNEX A:

## HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK

Information Required	Description
<b>Habitat Bank Location ("Service Area")</b>	<p>The Service Area of the Habitat Bank will include Habitat Banking Projects situated geographically within the lands and waters managed by VFPA and within the navigational jurisdiction of VFPA pursuant to its Letters Patent, as amended from time to time. The Service Area includes the Fraser River Estuary and its tributaries, Burrard Inlet, the Strait of Georgia and its associated inlets (See Figure 1.0 below) and will include other areas as established from time to time as mutually agreed to by the Participants.</p> <p>Figure 1.0 Service Area of the Habitat Bank</p> 
<b>Habitat Bank Administration</b>	<p>The Habitat Bank is a long-term initiative, comprised of Habitat Banking Projects, that is used to proactively create, restore or enhance fish habitat to benefit fish and wildlife species. Consistent with VFPA's mandate, this enables VFPA to balance future infrastructure development opportunities with a healthy environment.</p> <p><u>Site Selection:</u> Habitat Banking Projects for the Habitat Bank will generally be selected based on the following considerations and criteria:</p>



Draft: February 21, 2019

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	<p>(a) <u>Need</u>: Locations characterized by low productive capacity for species and stocks of interest or species at risk will be considered as a priority for the Habitat Bank. The intent is to develop or improve habitat capacity in the Service Area where habitat is needed and in support of applicable DFO policies.</p> <p>(b) <u>Habitat Productivity</u>: Emphasis will be placed on creation of high value habitat types that support a large number of ecological services and species functions (e.g. eelgrass beds and low marshes): The value of productivity will be assessed in the context of “need” (see (a) above).</p> <p>(c) <u>Site location</u>: Sites for the Habitat Bank will be selected based on their proximity to potential development areas with significant or rare ecological habitats or where onsite habitat compensation opportunities may be limited.</p> <p>(d) <u>Feasibility and cost</u>: Coastal zone processes, river hydraulics, biological productivity and ecological functioning are amongst the factors that will be used to determine the feasibility of habitat creation. In some areas it may not be possible to achieve stable self-functioning habitat due to ongoing influences of physical processes. Further, some habitat creation options may be possible but only at extreme high cost. Consideration may be given if these habitat types are critical for endangered or threatened species and the habitat credit applied to the Habitat Bank recognizes the increased cost of development.</p> <p>Through regular liaison meetings between DFO and VFPA representatives, potential Habitat Banking Projects are <del>will be</del> identified and discussed.</p> <p>DFO’s confirmation of the appropriateness of a proposed Habitat Banking Project for inclusion in the Habitat Bank is <del>will be</del> achieved through submitting the project for review and confirmation by DFO using the “Project Confirmation” template set out in Annex B.</p> <p><u>Habitat Credits</u>:</p> <p>Habitat credit valuation will be established specifically for each Habitat Banking Project. This valuation will include the unit of measure and the value of the credits to be deposited in the Habitat Bank. A description of the approach and the analysis performed will be included in the preparation of the “Project Confirmation” using the template set out in Annex B.</p> <p>Habitat Banking Projects will be recorded as a deposit into the Habitat Bank on the Habitat Credit Ledger upon completion of construction of the Habitat Banking Project using the template set out in Annex C.</p>
--	--

Draft: February 11, 2019

	<p>The actual productive value of a particular Habitat Banking Project will be determined immediately prior to its proposed use as credit to offset a development project.</p> <p>VFPA shall, either through ownership, lease, licence or other agreement, ensure that a Habitat Banking Project site is protected at least until the withdrawal of the habitat credits from the Bank that are associated with the Habitat Banking Project site.</p> <p><u>Third Parties:</u></p> <p>VFPA may develop Habitat Banking Projects for inclusion in the Habitat Bank in collaboration with third parties. Once included in the Habitat Bank, such Habitat Banking Projects will be treated in the same manner as other Habitat Banking Projects that have been placed into the Habitat Bank.</p> <p>VFPA may enter into agreements with third parties to allow withdrawal of habitat credits, as defined by this Arrangement, when such an agreement facilitates development activities that support VFPA in fulfilling its mandate.</p>
<b>Bank Establishment Date</b>	<p>July 31, 2012 for a five (5) year trial period under the terms of the Working Agreement, which was executed on September 10, 2012, and which was extended by the Participants to March 31, 2019, and which was replaced by this Arrangement for a term of fifteen (15) years from the date this Arrangement comes into effect.</p>

Draft: February 21, 2019

## **ANNEX B**

### **FORM OF PROJECT CONFIRMATION**

The following document template (titled Project Confirmation) will be used to identify and confirm that a proposed Habitat Banking Project is appropriate and confirmed for development and deposit in the Habitat Bank.

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Draft: February 11, 2019

 <b>Habitat Enhancement Program</b>	 <b>Fisheries and Oceans Canada</b> <b>Pêches et Océans Canada</b>  <b><u>Project Confirmation</u></b>
<b>PROJECT NAME:</b>	

---

### Terminology used:

- “**Arrangement**” refers to the arrangement between Fisheries and Oceans Canada and Vancouver Fraser Port Authority for the management and administration of the Vancouver Fraser Port Authority Habitat Bank
- “**DFO**” refers to Fisheries and Oceans Canada
- “**FPIP**” refers to *Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting (2013)*
- “**VFPA**” refers to Vancouver Fraser Port Authority
- “**Project**” refers to the proposed \_\_\_\_\_
- “**QEP**” refers to a Qualified Environmental Professional

---

### Preamble:

In accordance with the Arrangement, this Project Confirmation will be used to confirm that:

- VFPA consulted and negotiated with DFO on the suitability of the above-referenced Project for habitat banking purposes.
- DFO agrees, in principle, that the above-referenced Project would be acceptable as fish habitat as identified herein.
- DFO agrees that the identified type of fish habitat and the approximate quantity of fish habitat would be suitable for habitat banking.
- The Project meets the terms of the Arrangement with regard to need, fish habitat, productivity, site location, feasibility/cost, and ownership/tenure.
- DFO acknowledges that VFPA has developed the project concept and will move to final design as identified in the attached drawings.

*This Project Confirmation is used to support the conditions and requirements of the Arrangement and does not alter or modify the Arrangement in any manner. This Project Confirmation will also be used to confirm that the Project, if constructed as proposed, meets the objectives of the FPIP. An assisted assessment has determined that a DFO regulatory review pursuant to the Fisheries Act is not required for the Project. This assessment was conducted by a QEP in accordance with guidance from DFO’s Projects Near Water web site and DFO’s “Science Advice for Managing Risk and Uncertainty in Operational Decisions of the Fisheries Protection Program” (2014). As would be expected for a viable habitat enhancement opportunity, this assessment concluded that the Project will not result in Serious Harm to fish that contribute to commercial, recreational or Aboriginal (CRA) fisheries.*

*As the Project proceeds, VFPA will maintain responsibility to ensure that the Project has undergone appropriate reviews and assessments, including those mandated by applicable environmental assessment legislation (e.g., Species at Risk Act, if applicable) and any other VFPA-mandated reviews and assessments.*

---

Draft: February 21, 2019

<b>Project Overview:</b>	
<ul style="list-style-type: none"> <li>• <i>Description of the proposed project and how the proposed project will result in the creation of fish habitat that will provide long-term benefits for targeted species of fish such as salmon, aquatic species at risk or other species that may utilize the project area.</i></li> <li>• <i>Description and valuation of the ecological functions that the proposed project will include.</i></li> <li>• <i>Brief description of the proposed construction activities, including how they will be undertaken to avoid and mitigate any impacts to fish and fish habitat.</i></li> <li>• <i>Brief description of the proposed timing for project completion, including post-construction monitoring.</i></li> </ul>	
Water feature name:	
<b>Location of Works</b>	
Regional district/ land use authority:	
City/municipality:	
Lat./Long.	
Property ownership:	
<b>Description of Pre-Construction Values</b>	
<ul style="list-style-type: none"> <li>• <i>Description of pre-construction habitat values and conditions, including biophysical attributes</i></li> <li>• <i>Description of pre-construction use of the area, including site history as appropriate</i></li> </ul>	
<b>Description of Proposed Activities</b>	
<ul style="list-style-type: none"> <li>• <i>Detailed description of construction activities and design approach</i></li> <li>• <i>Includes attachment of design drawings, and proposed habitat area for construction</i></li> <li>• <i>Description of construction methodology and detailed mitigation measures</i></li> </ul>	
Overall work schedule:	
Least risk work window:	
<b>Potential Habitat Gains and Anticipated Affected Areas</b>	

Draft: February 21, 2019

- *Description of habitat gains, and anticipated affected habitat, table format*

Habitat Type	Potential Habitat Gain (m <sup>2</sup> )	Anticipated Affected Habitat (m <sup>2</sup> )	Comments
X Habitat Type			
<b>Habitat Gains and Affected Habitat</b>			

## Fish Productivity Investment Policy Considerations

- *Description and high-level summary of how the proposed project is expected to comply with FPIP objectives, based on project characteristics, ecology of relevant fisheries species, fisheries management objectives, and any local restoration priorities.*
- *This includes a review of readily available online information including DFO fisheries management plans and other documents as required*
- *Description and rationale for how the proposed project meets the following 4 Principles of the FPIP:*
  - **Principle 1:** *Offsetting measures must support fisheries management objectives or local restoration priorities.*
    - *Rationale:*
  - **Principle 2:** *Benefits from offsetting measures must balance Project impacts.*
    - *Rationale:*
  - **Principle 3:** *Offsetting measures must provide additional benefits to the fishery.*
    - *Rationale:*
  - **Principle 4:** *Offsetting measures must generate self-sustaining benefits over the long-term.*
    - *Rationale:*

## Post Construction Monitoring Plan

- *An as-built survey will be provided to document and confirm the size of the created habitat, following construction.*
- *VFPA will ensure that post-construction monitoring is undertaken in accordance with standard DFO requirements to confirm that created fish habitats are functioning as intended.*
- *A Post-Construction Monitoring Plan for the Habitat Enhancement Program has been created to outline monitoring requirements for habitat banking project sites.*
- *Monitoring will include assessments of site stability, proper physical function, planting success, and achievement of the desired biological objectives.*
- *VFPA to provide an estimate of predicted time for the vegetation at the site to become well established*

Draft: February 21, 2019

Attachments	
<ul style="list-style-type: none"><li>• <i>Design Drawings (attachment)</i></li></ul>	
<p>Signed on behalf of Vancouver Fraser Port Authority:</p>  <hr/> <p>Habitat Enhancement Program Vancouver Fraser Port Authority</p>	<p>Date: <hr/></p>

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Draft: February 21, 2019

## **ANNEX C**

### **HABITAT CREDIT LEDGER**

The following template shall be used to record and track the credits associated with each Habitat Banking Project that has been deposited in the Habitat Bank. The completed Habitat Credit Ledger will be submitted to DFO at the following frequency:

- with each Annual Report; and
- following a transaction in the Habitat Bank (withdrawal or deposit of credits).

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Draft: February 21, 2019

## **ANNEX D**

### **FORM OF PROGRESS REPORTS**

The following reports will be used to document and communicate the status of the Habitat Bank on an annual basis:

- Annual Report for VFPA's Habitat Bank; and
- Annual Habitat Monitoring Report for VFPA's Habitat Bank.

Each report will be submitted to DFO on annual basis and shall include the detail as provided in the following Outline of Content.

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Draft: February 11, 2019

<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<b><u>SECTION</u></b>	<b><u>CONTENT</u></b>
<b>1. Table of Contents</b>	
<b>2. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>3. Executive Summary</b>	<ul style="list-style-type: none"> <li>• Identification of purpose of Annual Report</li> <li>• Statement of commitment between Participants for a working relationship built on trust, accountability and information sharing</li> <li>• Overview of annual transactions and current credits</li> </ul>
<b>4. Introduction</b>	<ul style="list-style-type: none"> <li>• Background on the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>5. Administration of the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Tracking processes and responsibilities</li> <li>• Activities started/completed in Reporting Period</li> <li>• Annual Review</li> <li>• VFPA and DFO Liaison Activities</li> <li>• Achievements in Reporting Period</li> </ul>
<b>6. Credits in the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Summary of the credits in the Habitat Bank and the transaction that were performed in the reporting year</li> </ul>
<b>7. General Ledger</b>	<ul style="list-style-type: none"> <li>• Overview of the General Ledger</li> </ul>
<b>8. Habitat Balance Sheet</b>	<ul style="list-style-type: none"> <li>• Overview of the Habitat Balance Sheet</li> </ul>
<b>9. Anticipated Program for 20XX [Next Year]</b>	<ul style="list-style-type: none"> <li>• Projects Currently under Construction</li> <li>• Priority Projects for 20XX</li> </ul>
<b>10. Management Issues and Opportunities</b>	<ul style="list-style-type: none"> <li>• Challenges and issues encountered</li> <li>• Obstacles</li> <li>• Potential remedial measures for implementation next year</li> </ul>
<b>11. Indigenous Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of Indigenous engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>

Draft: February 21, 2019

<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>12. Public and Key Stakeholder Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of public and key stakeholder engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Summary of VFPA and DFO Meetings in the Reporting Year
Appendix B	As-Built Reports
Appendix C	Credit Transaction Reports
Appendix D	Map of Sites in the Habitat Bank
Appendix E	General Ledger
Appendix F	Habitat Balance Sheet
Appendix G	Map of Sites Proposed for Next Year

Draft: February 11, 2019

<b><u>ANNUAL HABITAT MONITORING REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>1. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>2. Introduction</b>	<ul style="list-style-type: none"> <li>• Background of the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>3. Types of Monitoring</b>	<ul style="list-style-type: none"> <li>• Description of the various types of monitoring that is used for the administration of the Habitat Bank</li> </ul>
<b>4. 20XX Monitoring Results</b>	<ul style="list-style-type: none"> <li>• Overview of monitoring results for each Habitat Banking Project (Detailed reports are included in Appendix A)</li> </ul>
<b>5. Next Year's Habitat Monitoring Report</b>	<ul style="list-style-type: none"> <li>• Overview of next year's anticipated habitat monitoring</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Habitat Banking Project Monitoring Reports
Appendix B	Monitoring Status and Proposed Monitoring Schedule

Draft: February 21, 2019

## **ANNEX E**

### **EXISTING PROJECTS**

The Habitat Banking Projects that are identified herein represent the status of the Habitat Bank and projects planned for the Habitat Bank as of the Effective Date of this Arrangement.

Table 1 – Habitat Banking Projects currently deposited in the Habitat Bank

Table 2 – Habitat Banking Projects that have been proposed by VFPA and accepted by DFO as appropriate for development and deposit into the Habitat Bank

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Draft: February 21, 2019

**Table 1.0 – Habitat Banking Projects Deposited to VFPA Habitat Bank**

No.	SITE	LOCATION	BANKED AREA (m <sup>2</sup> )	STATUS
1.	Salt Marsh Restoration – TFN (3.1 & 3.2)	Delta (Tsawwassen)	6,635 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
2.	Salt Marsh Restoration - Boundary Bay (3.3, 3.4 & 3.5)	Delta (Boundary Bay)	56,357 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
3.	Glenrose Tidal Marsh	Delta	10,778 m <sup>2</sup> (tidal freshwater marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
4.	Riverfront Park Tidal Marsh	Vancouver	1,481 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
5.	Gladstone Park Tidal Marsh	Vancouver	3,181 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
6.	Timberland Basin Habitat	Surrey	1,146 m <sup>2</sup> / 2,777 m <sup>2</sup> (tidal freshwater marsh / tidal freshwater mudflat)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
7.	New Brighton Park Shoreline Habitat Restoration Project	Vancouver	9,872 m <sup>2</sup> (salt marsh, marine tidal channel & mudflat, cobble/boulder beach, and marine riparian)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>

Draft: February 11, 2019

**Table 2.0 – Habitat Banking Projects Proposed by VFPA and accepted by DFO as appropriate for the Habitat Bank**

No.	SITE	LOCATION	APPROX. GROSS AREA (ha.)	STATUS
1.	Cates Landing Habitat Restoration	North Vancouver	~1.0 ha	• Complete
2.	Maplewood Marine Restoration Project	North Vancouver	~7.0 ha	• Permitting and approvals in progress
3.	Tsawwassen Eelgrass Project	Delta	~4.3 ha	• Permitting and approvals in progress
4.	South Arm Jetty Tidal Marsh Project	Richmond	~44.0 ha	• Permitting and approvals in progress
5.	Westham Island / Canoe Pass Tidal Marsh Project	Ladner	~4.0 ha	• Permitting and approvals in progress
6.	McDonald Tidal Marsh Project	Richmond	~2.8 ha	• Permitting and approvals in progress
7.	Point Grey Tidal Marsh Project	Vancouver	~41.0 ha	• To be advanced in future years
8.	Steveston Island Tidal Marsh Project	Richmond (Steveston)	~6.5 ha	• To be advanced in future years



Draft: February 11, 2019

## ANNEX F

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: USE OF HABITAT CREDITS TO MEET OFFSETTING REQUIREMENTS OF A *FISHERIES ACT* AUTHORIZATION**

Consultation with Indigenous peoples is required when Fisheries and Oceans Canada (DFO) makes a regulatory decision that may adversely impact potential or established Aboriginal or treaty rights, Indigenous groups and their related interests. Under the fisheries protection provisions of the *Fisheries Act*, a regulatory decision occurs when DFO contemplates the decision to authorize a work, undertaking or activity under section 35(2)(b) of the *Fisheries Act*. Indigenous consultation will normally take place after DFO has received an Application for Authorization and determined that the information requirements set out in the *Applications for Authorization* under Paragraph 35(2)(b) of the *Fisheries Act Regulations* have been met.

DFO will consult on the work, undertaking or activity being authorized under section 35(2)(b) of the *Fisheries Act* and any other aspects of the Authorization that have the potential to adversely impact potential or established Aboriginal or treaty rights, and related interests. The goal of these consultations will be to identify measures to avoid, minimise, or if required accommodate for, potential impacts of the work, undertaking or activity on the rights or interests of Indigenous peoples through mitigation and offsetting to be incorporated into the Authorization.

As the purpose of utilizing habitat banking credits is to meet offsetting requirements of an Authorization issued under section 35(2)(b) of the *Fisheries Act*, the proposed use of habitat banking credits is subject to Indigenous consultation.

Draft: February ■, 2019

## **ANNEX G**

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: HABITAT BANKING PROJECT DEVELOPMENT BY HEP**

#### **Overview and Purpose**

Indigenous consultation and engagement is a key element for the successful delivery of Habitat Banking Projects undertaken by VFPA's Habitat Enhancement Program (HEP). This Annex describes the process implemented by HEP for developing Habitat Banking Projects and identifies key points during the process for input and involvement by Indigenous groups. HEP's consultation and engagement with Indigenous groups aims to identify and address project-related impacts, to design and implement appropriate mitigation measures, and to explore opportunities for Indigenous involvement such as participation in field studies and/or employment, training and contracting. Subject to the discretion and direction of applicable regulatory agencies, including VFPA, HEP also aims to undertake consultation with Indigenous groups in accordance with the requirements of regulatory processes that are applicable to the Habitat Banking Project (such as VFPA's Project and Environmental Review Process).

Draft: February 2, 2019

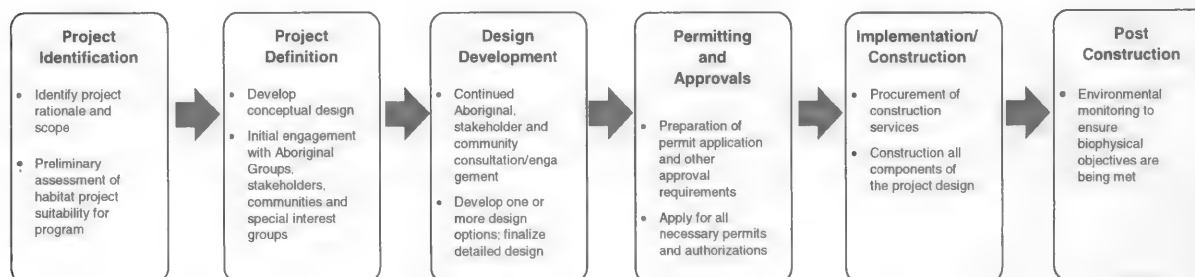
## Habitat Banking Project Development Process

The development of Habitat Banking Projects is achieved through six basic project management phases that are used to guide and control the project from start to finish.

Commencing with the identification of a potential project, the process provides for the structured development and advancement of all required components required for project delivery.

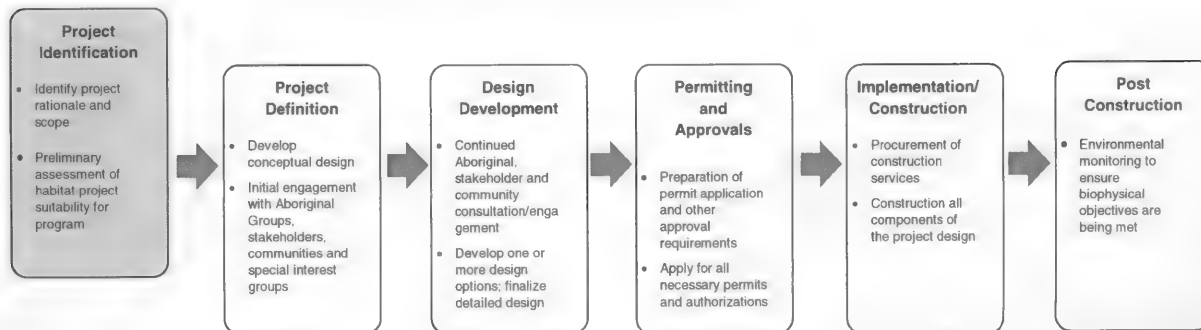
- Phase 1 (**Project Identification**) - The “idea” or the vision of what could be achieved.
- Phase 2 (**Project Definition**) - What are the project objectives? Constraints?
- Phase 3 (**Design Development**) - How will the project objectives be achieved?
- Phase 4 (**Permitting and Approvals**) - Obtaining formal permission to perform the work.
- Phase 5 (**Implementation/Construction**) - Construction of the habitat project.
- Phase 6 (**Post Construction**) - Ensuring long-term success of the habitat project.

The illustration below depicts these six key project management phases and provides the key tasks associated with each.



Draft: February 21, 2019

## Phase 1 - Habitat Banking Project Identification



The identification of potential Habitat Banking Projects is a critical component of the project delivery process. Considerations include habitat need, habitat productivity, feasibility, cost, land tenure, DFO confirmation and Indigenous matters.

### Indigenous Consultation and Engagement

- *HEP seeks input from Indigenous groups on identification of potential habitat enhancement sites*
- *HEP seeks input from Indigenous groups on Habitat Banking Projects identified by others*
- *Indigenous groups share available traditional knowledge, information and studies*

Draft: February 11, 2019

## Phase 2 - Habitat Banking Project Definition



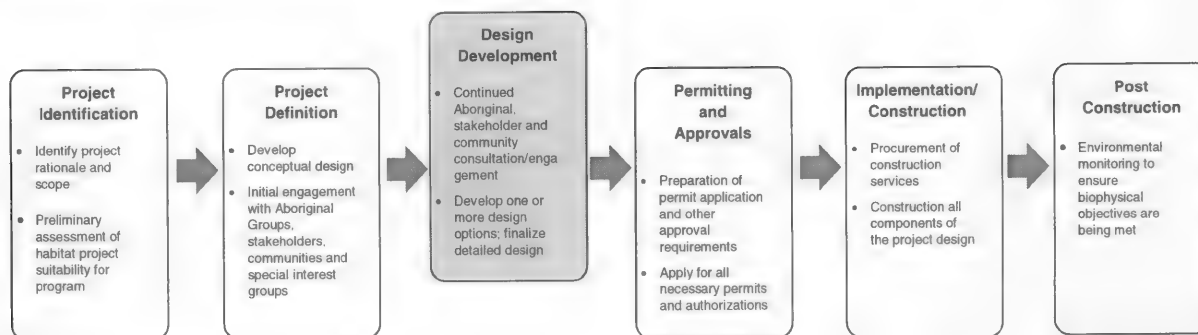
The development of conceptual designs is key in defining what a Habitat Banking Project could include. Using these concept designs, initial engagement and consultation on specific project features can commence.

### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on preferred engagement activities for project (e.g. Aboriginal Technical Design Committee)*
- *HEP consults Indigenous groups on project concept*
- *HEP identifies potential habitat values (i.e. credit estimates) that could be created and engages with interested Indigenous Groups*
- *Indigenous groups share Traditional Knowledge with HEP*
- *HEP identifies opportunity for involving Indigenous groups in field studies and assessments*
- *HEP commences planning for Indigenous involvement throughout project (e.g. contracting, employment and training opportunities)*

Draft: February 11, 2019

## Phase 3 - Design Development



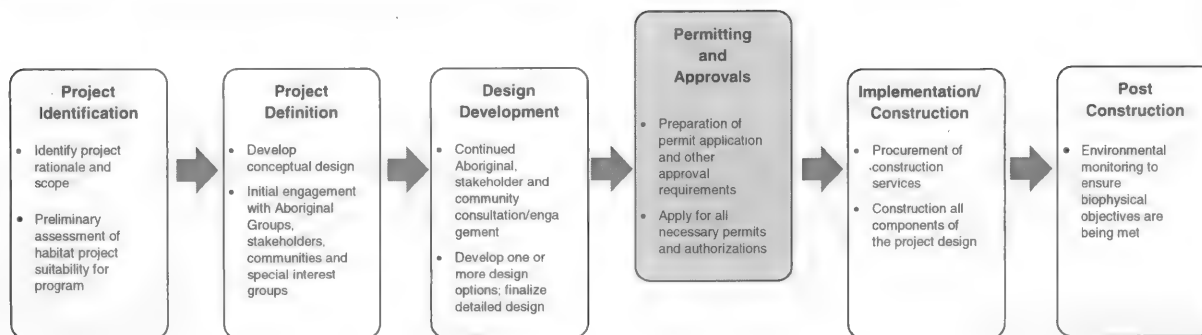
In the design phase, one or more designs are developed and evaluated. Through an iterative design process, a final design is selected and is refined to include all details necessary for construction.

### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on the design options*
- *HEP considers Indigenous feedback and refines design of project where appropriate (including selection of plant species)*
- *Where required, HEP undertakes further consultation with Indigenous groups on the design*
- *HEP finalizes the design*
- *HEP shares final design with Indigenous groups*
- *HEP confirms habitat values (i.e. credits) and consults with Indigenous groups*
- *HEP obtains DFO confirmation of appropriateness of habitat project for the Habitat Enhancement Program*
- *HEP plans for continued Indigenous involvement in subsequent phases*

Draft: February 11, 2019

## Phase 4 - Permitting and Approvals



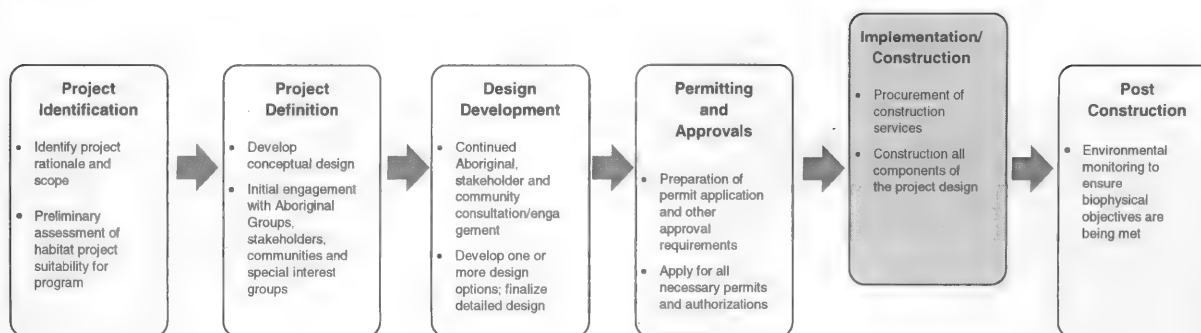
Permits and approvals that are required must be addressed on a project-by-project basis as regulatory requirements and land ownership can vary significantly.

### Indigenous Consultation and Engagement

- *HEP engages with Indigenous groups in relation to permits and approvals*
- *HEP develops a summary of permits and approvals required and shares with Indigenous groups*
- *HEP seeks Indigenous input and support on permit applications*
- *HEP notifies Indigenous groups on submission of permit applications*
- *Regulators and permitting authorities may undertake Indigenous consultation*
- *HEP plans for continued Indigenous involvement in subsequent phases*

Draft: February 21, 2019

## Phase 5 - Implementation/Construction



The Habitat Banking Project takes shape during the Implementation/Construction Phase.

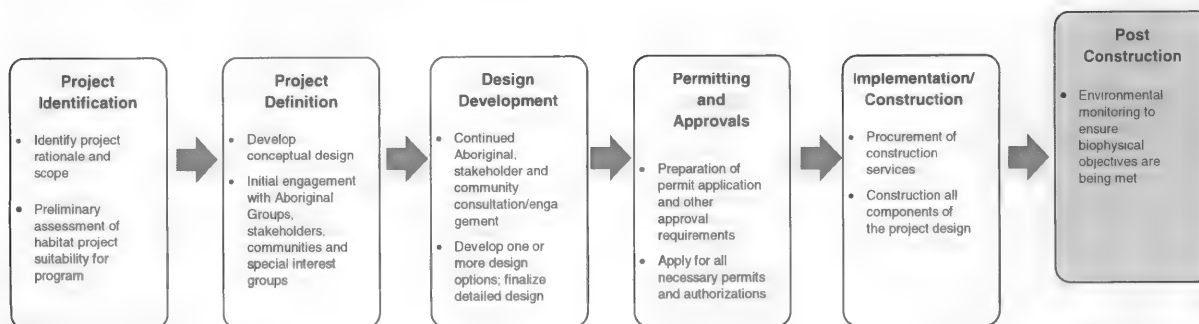
### Indigenous Consultation and Engagement

- *HEP identifies approach to procurement and determines opportunities for Indigenous involvement/benefits*
- *HEP monitors conditions of approval/permits and any commitments to Indigenous groups*
- *HEP continues to keep Indigenous groups updated on progress of construction (e.g. sharing of construction monitoring reports)*
- *HEP plans for continued Indigenous involvement in Post Construction Phase*



Draft: February 21, 2019

## Phase 6 - Post Construction



### Indigenous Consultation and Engagement

- *HEP considers opportunities for enhanced integration of Indigenous input and identification of priorities into planning for post construction monitoring*
- *HEP shares Post Construction Monitoring Plan with Indigenous groups*
- *Potential contracting opportunities for Indigenous groups (e.g. maintenance, monitoring)*
- *HEP explores opportunities for enhanced sharing of information (e.g. data collection such as potential DNA analysis, fish use data etc.)*
- *HEP engages Indigenous groups regarding other types of reporting that the HEP can share that communicates project benefits and information of importance to Indigenous communities*

**From:** [Olson, Charlotte](#)  
**To:** [Thorpe, Suzanne](#); [Nutton, Byron](#)  
**Cc:** [Ruffo, Gord](#); [Scoble, Jemma](#)  
**Subject:** IG Email Records for DFO RE VFPA-DFO Habitat Bank Arrangement Consultation  
**Date:** 2019-February-22 8:10:17 AM  
**Attachments:** [image001.png](#)  
[Records for DFO-IG Consultation w VFPA.zip](#)

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Hi Suzanne (and Byron), as requested attached here is a zip file with the following 6 Email Records:

1. 3 Example email records where VFPA sent out the draft IG Information Session Meeting Notes (dated Jan 11/19):
  - a) Vancouver (MIB Example)
  - b) Vancouver Island
  - c) Chilliwack
2. 3 Example email records where VFPA sent out the final draft IG Summary Report (dated Feb 7/19)
  - a) Vancouver (MIB Example)
  - b) Vancouver Island
  - c) Chilliwack

Please note that we did send both draft notes, and final draft reports to ALL groups that we engaged with (as listed in the plan and the report), all that has been provided here is one example from each session. Let me know if you have any problems with opening the files.

Should you need anything further, please let us know.

Regards,  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

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pages 1557 to / à 1565**

**From:** [Olson, Charlotte](#)  
**To:** [Nutton, Byron](#)  
**Cc:** [Thorpe, Suzanne](#); [Ruffo, Gord](#)  
**Subject:** RE: Habitat Bank - Feb 21 minor edits  
**Date:** 2019-February-22 9:28:21 AM

---

Excellent, thank you Byron – we will get going on these edits right now.

Regarding your yellow note below and your proposed approach to actual sign-off. The approach you outline seems fine to me, I'll just check with senior VFPA management if there are any concerns with VFPA signing first, and get back to you if so.



Charlotte

**From:** Nutton, Byron [mailto:[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)]  
**Sent:** February-21-19 5:07 PM  
**To:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Cc:** Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Subject:** Habitat Bank - Feb 21 minor edits

Hi Charlotte,

I did follow-up with Jason after our call this morning to remind him of our timelines. I expect to hear back from him by early next week regarding any final comments from our management and I will be sure to let you know as soon as I do.

In the meantime, as discussed, please find the attached document with some minor editorial comments and suggested modified wording for Section 4, all high-lighted in red and listed below for easy reference:

Cover page (and subsequent pages) – updated the date in the header.

Cover page – added PATH file #

Page 3, section 3, bullet 3 – corrected document title and removed (“Guide”) as it really isn’t needed

Page 4, section 4 – suggested wording as discussed

Page 12 – one missing comma and a couple of changes to the tense for consistency

Pages 12, 32, 33, 35, 36 – several missing commas behind i.e. and e.g. – my sense is that the convention could go either way, but it should be consistent and it looks like most instances include the comma so easier to add a couple more

Lastly, for now at least...

With respect to logistics of sign-off I’m expecting that we will both send the final-final up through our respective organizations with all the appropriate final briefings at the same time, but that I will advise my management to not sign the copy I forward and instead be prepared to sign the copy with original VFPA signatures, which you will deliver to our office once it is through your shop. Please let

me know if that sounds right to you or if you have other expectations.

Cheers,

*Byron Nutton*, RPBio

**A/Team Lead | Chef d'équipe Intérimaire**

Partnerships, Standards and Guidelines | Partenariats, Normes et lignes  
directrices

Fisheries Protection Program | Programme de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

250-618-4268

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## Hwang, Jason

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**From:** Nutton, Byron  
**Sent:** February-22-19 11:53 AM  
**To:** Hwang, Jason  
**Subject:** VFPA notes

Hey Jason,

The e-mail trail below is a little old, but clearly shows the consideration of 3<sup>rd</sup> party use of credits at Senior Management levels.

On-going dialogue with AI, and at times Brad, has been supportive of the approach taken to manage the risk and they have provided clear direction to maintain negotiation of the new arrangement in Region.

Cheers,

Byron

**From:** Webb, Cheryl  
**Sent:** 2016-December-15 7:21 PM  
**To:** Nutton, Byron  
**Cc:** Fanos, Brad; Magnan, Alain  
**Subject:** RE: VFPA Habitat Banking

Thanks Byron, those are exactly the issues raised by PoV in our call this am, so thank you.

As it related to issues 3 and 4, Nick indicated that they were likely resolvable. He supported a longer term agreement with a clause to consider legislative and policy changes.

He indicated that issues 1&2 were a little more difficult, inter-related and required further consideration. He acknowledged that PoV was a leader in the country on these issues. He expressed concern that we need to be in a position to ensure that any offsets that are attributed to third parties are sustainable and are not later turned over to further development. The long term viability and integrity of any banking and offsetting was essential for DFO and integral to any habitat banking arrangement. The PoV seemed to understand the last two point, but we will need to see how that translates into their position as we negotiate the arrangement moving ahead.

Cheryl

**From:** Nutton, Byron  
**Sent:** Tuesday, December 13, 2016 3:52 PM  
**To:** Webb, Cheryl <[Cheryl.Webb@dfo-mpo.gc.ca](mailto:Cheryl.Webb@dfo-mpo.gc.ca)>  
**Subject:** VFPA Habitat Banking

Hi Cheryl,

As discussed, I met with VFPA last week regarding renewal of their existing Habitat Banking Agreement. This was the first meeting since the release of the Interim Guidance document so things may evolve, but at this point the 4 key areas of focus for clarification (i.e. we anticipate some challenges) are as follows:

#### **Use of credits by third parties**

- The Interim Guide indicates that habitat credits can only be used by the proponent responsible for implementation of the bank.
- VFPA insists that they require the ability to transfer credits to offset tenant and/or third party-led infrastructure projects - this provision exists in VFPA's current Agreement.
- They also suggest that this would likely be a key issue to other port authorities and other proponents with similar jurisdictional oversight.
- Apparently this item was discussed between VFPA and Nick Winfield in October 2015 in Ottawa.

#### **Land tenure**

- The Interim Guide indicates that the land tenure requirements for habitat banking sites would be similar to the requirements for sites used for project specific offsetting (e.g. conventional offsetting).
- VFPA feels that there may be inconsistency between practice and policy with regard to tenure for sites used for project specific offsetting.
- VFPA is seeking further clarification on this item.

#### **Duration of Agreement**

- The Interim Guide outlines a defined effective period for an Agreement (e.g. it includes an expiration date).
- The existing agreement is effective for 5 years, which VFPA indicates was intended as a pilot/trial and are now looking for a long-term arrangement (10-20 years).
- Based on the wording in the document (i.e. Interim Guidance, Pilot Projects) I am uncertain of the intention with respect to what would be considered a reasonable length.

#### **Timelines & resources to execute the new Agreement**

- A clear schedule, and confirmation of necessary resources (including DFO staff time), to ensure a common understanding of timelines for execution of a new Agreement between VFPA and DFO is critical.
- If a new agreement is not completed by March 31, 2017, VFPA's construction delivery program for 2017 could be delayed and this is a concern to VFPA.

Coming out of the meeting, I agreed to take these items forward within DFO (my plan was to start with Alywn Rose who was the principle author of the Interim Guide), to ensure that I understand the intended interpretation of these items as they are discussed in the Interim Guide. I have a follow-up meeting with VFPA planned for late January.

*Byron Nutton, RPBio*

**A/Team Lead | Chef d'équipe Intérimaire**

**Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices**

**Fisheries Protection Program | Programme de protection des pêches**

**Fisheries and Oceans Canada | Pêches et Océans Canada**

**Pacific Region | Région du Pacifique**

**250-618-4268**

## Hwang, Jason

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**From:** Hwang, Jason  
**Sent:** February-22-19 2:51 PM  
**To:** Ko, Christina  
**Subject:** FW: VFPA Habitat bank - DRAFT BN v2  
**Attachments:** 2019-02-20\_VFPA\_HBA\_BN\_for\_Decision\_DRAFT.docx; 2019-02-13 VFPA proposed changes to Habitat Bank Arrangement.docx; 2019-02-01 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev0-FINAL DRAFT.pdf

Hi Christina. Can you set a time for Byron and I to have a call with Brad on the content of this email. The call needs to be before Thursday next week. I was speaking with Brad this morning and he indicated he would likely be freeing up his Wednesday. Byron and I both have things in our calendars on Wednesday, but we both adjust what we have to be available for anytime that day that suits Brad. If he has time earlier in the week, that might even be better, but when I spoke with him this morning he thought his days were pretty full.  
If you want to discuss this you can get me on my cell 250 318 4225.  
Jason

---

**From:** Hwang, Jason  
**Sent:** February-22-19 2:48 PM  
**To:** Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** FW: VFPA Habitat bank - DRAFT BN v2

Hi Brad. There are 3 documents attached regarding the VFPA Habitat Banking agreement. I have reviewed these:

1. draft of the Briefing Note,
2. the current draft of the Arrangement (still a few minor items to tidy up)
3. the Indigenous engagement summary report

You had asked some questions previously that we have addressed:

1. the template Arrangement included in the guidance document has the RD (as opposed to the RDG) as the signatory;
2. Policy confirmed that there is no requirement for, and they have no capacity to support, a review from their shop.

Byron and I are able to brief you on Wednesday – I will ask Christina to set a time.

Jason

**Pages 2501 to / à 2505  
are duplicates of  
sont des duplicatas des  
pages 2193 to / à 2197**

**Pages 2506 to / à 2541  
are duplicates of  
sont des duplicatas des  
pages 2157 to / à 2192**



**Pages 2542 to / à 2556  
are duplicates of  
sont des duplicatas des  
pages 1693 to / à 1707**

**From:** [Olson, Charlotte](#)  
**To:** [Nutton, Byron](#)  
**Cc:** [Thorpe, Suzanne](#); [Ruffo, Gord](#)  
**Subject:** RE: Habitat Bank - Feb 21 Final Draft for DFO  
**Date:** 2019-February-26 7:38:07 AM  
**Attachments:** [2019-02-21 Final \(DFO changes accepted\) Habitat Bank Arrangement.docx](#)  
**Importance:** High

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Good morning Byron,

As requested, VFPA has made all of DFO's edits on the Arrangement as sent Feb 21/19 – and reattaches here a final clean draft version dated the same, to reflect those edits.

Please send any last comments/edits from DFO Management prior to EOD Feb 28 (Thursday) as discussed – and VFPA will proceed through our final Executive approvals and return a signed document for DFO final execution.

Please call if you'd like to discuss before our Feb 28 1pm call

Thanks, Charlotte

604-349-4111

**From:** Nutton, Byron [mailto:[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)]  
**Sent:** February-21-19 5:07 PM  
**To:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Cc:** Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Subject:** Habitat Bank - Feb 21 minor edits

Hi Charlotte,

I did follow-up with Jason after our call this morning to remind him of our timelines. I expect to hear back from him by early next week regarding any final comments from our management and I will be sure to let you know as soon as I do.

In the meantime, as discussed, please find the attached document with some minor editorial comments and suggested modified wording for Section 4, all high-lighted in red and listed below for easy reference:

Cover page (and subsequent pages) – updated the date in the header.

Cover page – added PATH file #

Page 3, section 3, bullet 3 – corrected document title and removed (“Guide”) as it really isn’t needed

Page 4, section 4 – suggested wording as discussed

Page 12 – one missing comma and a couple of changes to the tense for consistency

Pages 12, 32, 33, 35, 36 – several missing commas behind i.e. and e.g. – my sense is that the convention could go either way, but it should be consistent and it looks like most instances include the comma so easier to add a couple more

Lastly, for now at least...

With respect to logistics of sign-off I'm expecting that we will both send the final-final up through our respective organizations with all the appropriate final briefings at the same time, but that I will advise my management to not sign the copy I forward and instead be prepared to sign the copy with original VFPA signatures, which you will deliver to our office once it is through your shop. Please let me know if that sounds right to you or if you have other expectations.

Cheers,

*Byron Nutton, RPBio*

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes  
directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

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Final draft: February 21, 2019

**Habitat Bank Arrangement:**

**PORT OF VANCOUVER HABITAT BANK**

Between

**VANCOUVER FRASER PORT AUTHORITY**

AND

**HER MAJESTY THE QUEEN IN RIGHT OF CANADA**, as represented by the Minister of  
Fisheries and Oceans on behalf of Fisheries and Oceans Canada ("DFO")

●xxxxxx, 2019

**PATH Number: 19-HPAC-00125**

Final draft: February 21, 2019

## 1. INTRODUCTION

This document sets out the principles of the mutual understanding between **Vancouver Fraser Port Authority** (“VFPA”) and Fisheries and Oceans Canada (“DFO”) (hereafter referred to as “the Participants”) for the **Port of Vancouver Habitat Bank** (“Habitat Bank”).

### WHEREAS:

- a. Fisheries and Oceans Canada (DFO) is responsible for the administration of the *Fisheries Act*, more specifically the fisheries protection provisions including sections 6, 20, 21, 35, 37, and 38 related to the conservation and protection of Canada's marine and freshwater fisheries resources and their habitats from the impact of human activities. The purpose of the fisheries protection provisions, as set out in section 6.1 of the *Fisheries Act*, is to provide for the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries;
- b. DFO is responsible for the administration of the *Species at Risk Act* ("SARA") with respect to aquatic species other than those individuals in or on federal lands administered by the Parks Canada Agency and, in that capacity, the Minister of Fisheries and Oceans has powers and duties with respect to protecting aquatic species listed under that Act and providing for their recovery;
- c. The Fisheries Protection Policy Statement's goal is to promote compliance with the *Fisheries Act* in order to contribute to the purpose set out in section 6.1 of the *Fisheries Act*;
- d. This Arrangement does not commit DFO to the authorization of any future work, undertaking or activity requiring an authorization under paragraph 35(2)(b) of the *Fisheries Act*, or permit any future project requiring a permit under sections 73 and 74 of the *Species at Risk Act*. All future projects will be reviewed on their own merit and a decision on whether to authorize or permit will be made independent of the existence of a habitat bank arrangement. This Arrangement, and any related communications between DFO and VFPA do not constitute a representation or commitment of any kind regarding authorization of any future projects by DFO. This Arrangement, and any related communications, moreover does not constitute a commitment that any habitat credits that may be issued will be acceptable in the context of future applications for *Fisheries Act* authorizations or SARA permits.
- e. VFPA is a port authority established by the Government of Canada pursuant to the *Canada Marine Act* and is accountable to the federal Minister of Transport. VFPA has a mandate to facilitate Canada's trade objectives, ensuring goods are moved safely, while protecting the environment and considering local communities. In fulfilling the mandate, VFPA carries out a variety of duties, including infrastructure development to support growth and efficient operations. The Habitat Bank can support such infrastructure development when habitat credits are acceptable in the context of future *Fisheries Act* authorizations or SARA permits.

Final draft: February 21, 2019

- f. The Participants entered into a Working Agreement dated July 31, 2012 (“Working Agreement”) relating to the procedures for development and operation of a VFPA-led habitat bank for a five (5) year trial period which was extended by the Participants to March 31, 2019;
- g. VFPA has undertaken several habitat creation and enhancement projects in consultation with DFO pursuant to the Working Agreement, which are included in Annex E (“Existing Projects”); and
- h. This Arrangement will replace the Working Agreement and the Existing Projects will be managed pursuant to this Arrangement.

**THEREFORE**, the Participants agree to the following arrangement (“Arrangement”).

## **2. PURPOSE**

To support VFPA in fulfilling its mandate (referred to in paragraph e above) by facilitating infrastructure development when habitat credits from the Habitat Bank can be applied to meet future offsetting requirements for such development.

To replace the Working Agreement with this Arrangement and to establish revised principles for the continuation and management of the Habitat Bank by:

- establishing a working relationship between the Participants based on trust, accountability and information sharing;
- establishing a clear understandable Arrangement for managing the Habitat Bank; and
- increasing certainty in the administration of the Habitat Bank.

## **3. OTHER GENERAL INFORMATION**

The activities carried out under this Arrangement will be consistent with:

- *Fisheries Protection Policy Statement* (2013);
- *Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting* (2013);
- *Fisheries Protection Program’s Interim Guide to Proponent-led Habitat Banking* (October, 2016);
- any relevant Species at Risk Recovery Strategies and management considerations; and
- any relevant Fisheries Management Objectives.

Final draft: February 21, 2019

#### **4. SCOPE**

The scope of this Arrangement is limited to the continuation and administration of the Habitat Bank described in Annex A, and including Habitat Banking Projects proposed in accordance with Annex B and the Existing Projects (described in Annex E). For the purposes of this Arrangement, a “Habitat Banking Project” shall mean a “conservation project” as defined in *Fisheries Protection Program’s Interim Guide to Proponent-led Habitat Banking* (October, 2016).

#### **5. ROLES AND RESPONSIBILITIES**

The roles and responsibilities of the VFPA are:

- Jointly managing the performance of the Arrangement with DFO;
- Identifying designing, constructing, monitoring, maintaining, and protecting Habitat Banking Project sites;
- Meeting all other applicable federal, territorial, provincial and municipal requirements that apply to Habitat Banking Projects;
- Reporting on performance of Habitat Banking Projects;
- Accurately maintaining a copy of the habitat credit ledger; and
- Preparing and submitting Progress Reports for the Arrangement.

The roles and responsibilities of DFO are:

- Jointly managing the performance of the Arrangement with VFPA;
- Reviewing, providing advice and confirming Habitat Banking Project proposals;
- Reviewing Progress Reports, validating habitat credit balances in the habitat credit ledger, and processing habitat credit ledger transactions;
- Verifying the reported results of Habitat Banking Project performance in the Progress Reports;
- When appropriate, carrying out direct monitoring (i.e., a site visit to gather and analyse samples or information in order to directly verify compliance and effectiveness) and/or carrying out indirect monitoring (i.e., an assessment of information provided in Progress Reports to verify compliance and effectiveness) of Habitat Banking Project sites; and
- Reviewing and processing Progress Reports of the Arrangement.

The Participants shall fulfill their responsibilities under this Arrangement in accordance with the provisions of federal, provincial and territorial laws and regulations that govern their activities. Should a Participant not be able to perform a function under this Arrangement, the affected Participant will immediately contact the other signatories of this Arrangement so that early resolution can be reached.

Final draft: February 21, 2019

## **6. MANAGEMENT PROVISIONS**

This Arrangement establishes the following management provisions for the administration of the Habitat Bank:

- The accountability lies with the office of signatories of the Arrangement: Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.
- The day to day administration of the Arrangement will be carried out by: Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region.

## **7. ADMINISTRATION OF THE HABITAT BANK ARRANGEMENT**

- Specific details related to the principles of the administration and operation of the Habitat Bank are included in Annex A;
- Habitat Banking Projects that are proposed for development are to be submitted for review and confirmation by DFO using the “Project Confirmation” template set out in Annex B;
- Habitat credits held within the Habitat Bank shall be tracked using the “Habitat Credit Ledger” template and frequency set out in and described in Annex C;
- Progress Reports shall be prepared and submitted annually in accordance with the requirements of Annex D;
- Existing Projects that were either constructed or proposed for construction under the terms of the Working Agreement are identified in Annex E; and
- Indigenous consultation and engagement related to the use of habitat credits is described in Annex F.

## **8. SHARING OF INFORMATION**

While this Arrangement is in effect and at all times thereafter, each of DFO and VFPA and any officers, employees or agents of each of them shall treat all information, data, documents, reports and materials acquired or to which access have been given in the course of, or incidental to, the performance of this Arrangement as confidential, subject to the federal *Access to Information Act* and the *Privacy Act*. With the exception of the Arrangement, the annexes to the Arrangement and annual Progress Reports, which VFPA may disclose from time to time, the Participants shall not disclose or permit to be disclosed such information, data, documents, reports and materials, unless:

- the Participants agree to the disclosure;
- the disclosure is part of the application and review process of VFPA’s Project and Environmental Review for a proposed Habitat Banking Project, which would include disclosure of project-specific information, engagement information for



Final draft: February 21, 2019

- public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of the application and review process by DFO for a proposed development project that would utilize habitat banking credits as offsetting, which would include disclosure of project-specific information, engagement information for public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of an application and review process of other regulatory agencies (such as Environment and Climate Change Canada for Disposal at Sea permit or exemption) for a proposed Habitat Banking Project, which would include disclosure only as required by such agencies;
- the disclosure relates to consultation and engagement with Indigenous groups as part of the Indigenous Consultation and Engagement Process set out in Annex G;
- the disclosure is to a third party as part of the Habitat Bank Administration as described in Annex A;
- the disclosure is required by law;
- the information was obtained from the public; or
- the information is available to the public.

## **9. CONSULTATION AND ENGAGEMENT**

The Participants will collaborate on an approach to meaningfully engage and consult with Indigenous groups having regard to the process being undertaken by VFPA's Habitat Enhancement Program for the development of Habitat Banking Projects and the involvement of Indigenous groups that is described in Annex G.

## **10. DIFFERENCES IN INTERPRETATION AND APPLICATION**

The Participants will endeavor to resolve issues regarding the implementation of this Arrangement in a timely manner using mechanisms available to the Participants. Where an issue remains unresolved, the pre-eminent jurisdiction responsible for the matter under consideration will make the final determination and seek concurrence from Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.

## **11. PROGRESS REPORTS**

The VFPA will prepare progress reports using the form described in Annex D ("Progress Report") on the achievements and challenges encountered during the reporting period of this Arrangement as it relates to the purposes identified in section 2 of this Arrangement.

The Progress Report should be submitted within ninety (90) calendar days from the conclusion of each year. A year will be considered to run from January 1 to December 31.

Final draft: February 21, 2019

The Progress Report will be submitted to the Office of signatories of the Arrangement, Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region, for their concurrence.

All Progress Reports will conform to the requirements set out in Annex D.

## **12. REVIEW**

At the end of each five (5) year period during which this Arrangement is in effect, the Regional Director, Ecosystems Management, DFO Pacific Region, may establish a review team consisting of Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region, or an appropriately qualified and mutually agreed to third party to review the effectiveness of activities under this Arrangement. This review team will report to the Regional Director, Ecosystems Management, DFO Pacific Region, within six (6) months of being established.

## **13. AMENDMENT**

The Arrangement may be amended at any time in writing and by mutual consent of the Participants. An amendment will be confirmed by an exchange of letters, signed by the Participants, setting out the amendment and its effective date.

## **14. FINANCIAL ARRANGEMENT**

This Arrangement will not impose any additional financial responsibilities on the Participants, except that each Participant will be responsible for the staff and funding costs it incurs in its own interests, related to the support of the Arrangement.

## **15. DURATION, WITHDRAWAL AND TERMINATION**

This Arrangement is in effect from the date first written above for a period of fifteen (15) years. VFPA can request renewal of the Arrangement for an additional defined term (of no less than five (5) years) by providing one year's written notice to the other Participant. If this Arrangement is not renewed at the expiration of the term or a renewal, and provided that VFPA is not in breach of this Arrangement, the Participants will continue to apply the terms of this Arrangement to all Habitat Banking Projects that are either deposited in the Habitat Bank or have been confirmed by DFO in accordance with Annex B.

## **16. LEGAL DISCLAIMER**

This Arrangement is an expression of the mutual intentions of the Participants and is not legally binding or enforceable against them.

Final draft: February 21, 2019

## **17. NOTICE**

All notices to be given under this Arrangement shall be in writing and shall be sent by prepaid registered mail or electronic transmission addressed to the Party entitled to receive the same, or delivered to such party as follows:

- if to VFPA:

Vancouver Fraser Port Authority (VFPA)  
100 The Pointe  
999 Canada Place  
Vancouver, British Columbia  
V6C 3T4

Attention: Director, Container Terminal Construction  
E-mail:

with a copy to:

Attention: Director, Legal Services  
E-mail:

- if to DFO:

Fisheries and Oceans Canada (DFO)  
Pacific Region, Ecosystems Management Branch  
Suite 200 – 401 Burrard Street  
Vancouver, BC  
V6C 3S4

Attention: Regional Director  
E-mail:

## **18. GENERAL**

VFPA is entering into this Arrangement on its own behalf and not as agent of Her Majesty in Right of Canada.

Final draft: February 21, 2019

**EFFECTIVE DATE AND SIGNATURE**

This Arrangement has been signed by the Regional Director of DFO Pacific Region of Fisheries and Oceans on behalf of Her Majesty the Queen in Right of Canada and by the VFPA on the dates noted below.

SIGNED IN THE PRESENCE OF:

FOR HER MAJESTY THE QUEEN IN RIGHT OF CANADA

\_\_\_\_\_  
Cheryl Webb  
Regional Director  
Ecosystems Management  
DFO Pacific Region

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

FOR VANCOUVER FRASER PORT AUTHORITY

\_\_\_\_\_  
Robin Silvester  
President and CEO

\_\_\_\_\_  
Witness (as to both)

\_\_\_\_\_  
Mark Gustafson  
Corporate Secretary

\_\_\_\_\_  
Date

This Arrangement comes into effect on the date that both Participants have signed above.

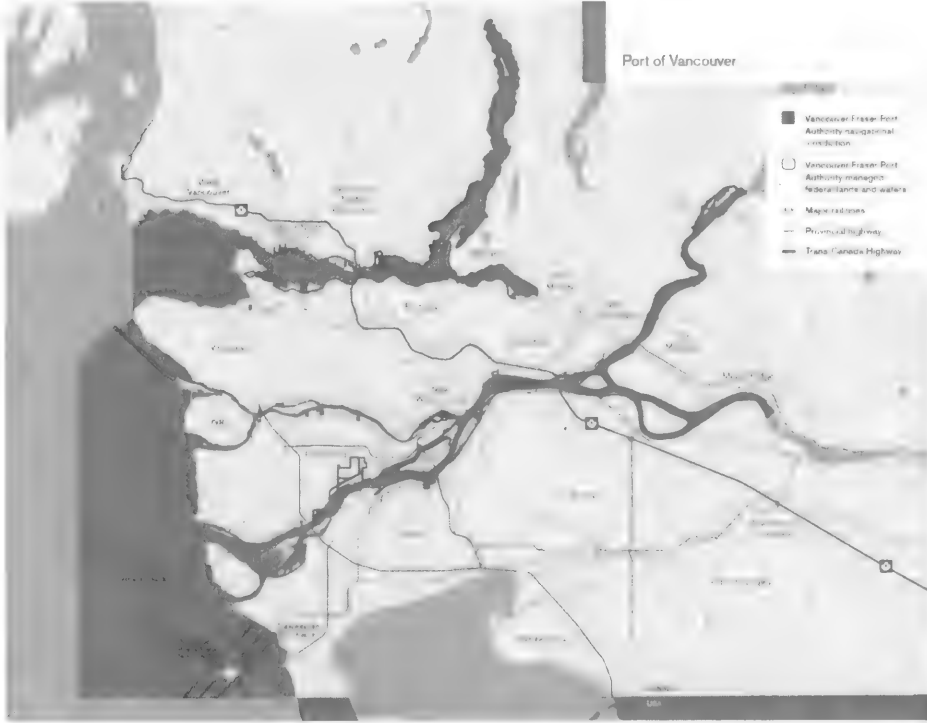
Final draft: February 21, 2019

## **ANNEX A**

### **HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK**

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Final draft: February 21, 2019

<b>ANNEX A:</b>  <b>HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK</b>	
<b>Information Required</b>	<b>Description</b>
<b>Habitat Bank Location (“Service Area”)</b>	<p>The Service Area of the Habitat Bank will include Habitat Banking Projects situated geographically within the lands and waters managed by VFPA and within the navigational jurisdiction of VFPA pursuant to its Letters Patent, as amended from time to time. The Service Area includes the Fraser River Estuary and its tributaries, Burrard Inlet, the Strait of Georgia and its associated inlets (See Figure 1.0 below) and will include other areas as established from time to time as mutually agreed to by the Participants.</p> <p>Figure 1.0 Service Area of the Habitat Bank</p> 
<b>Habitat Bank Administration</b>	<p>The Habitat Bank is a long-term initiative, comprised of Habitat Banking Projects, that is used to proactively create, restore or enhance fish habitat to benefit fish and wildlife species. Consistent with VFPA’s mandate, this enables VFPA to balance future infrastructure development opportunities with a healthy environment.</p> <p><u>Site Selection:</u> Habitat Banking Projects for the Habitat Bank will generally be selected based on the following considerations and criteria:</p>

Final draft: February 21, 2019

	<p>(a) <u>Need</u>: Locations characterized by low productive capacity for species and stocks of interest or species at risk will be considered as a priority for the Habitat Bank. The intent is to develop or improve habitat capacity in the Service Area where habitat is needed and in support of applicable DFO policies.</p> <p>(b) <u>Habitat Productivity</u>: Emphasis will be placed on creation of high value habitat types that support a large number of ecological services and species functions (e.g., eelgrass beds and low marshes). The value of productivity will be assessed in the context of "need" (see (a) above).</p> <p>(c) <u>Site location</u>: Sites for the Habitat Bank will be selected based on their proximity to potential development areas with significant or rare ecological habitats or where onsite habitat compensation opportunities may be limited.</p> <p>(d) <u>Feasibility and cost</u>: Coastal zone processes, river hydraulics, biological productivity and ecological functioning are amongst the factors that will be used to determine the feasibility of habitat creation. In some areas it may not be possible to achieve stable self-functioning habitat due to ongoing influences of physical processes. Further, some habitat creation options may be possible but only at extreme high cost. Consideration may be given if these habitat types are critical for endangered or threatened species and the habitat credit applied to the Habitat Bank recognizes the increased cost of development.</p> <p>Through regular liaison meetings between DFO and VFPA representatives, potential Habitat Banking Projects will be identified and discussed.</p> <p>DFO's confirmation of the appropriateness of a proposed Habitat Banking Project for inclusion in the Habitat Bank will be achieved through submitting the project for review and confirmation by DFO using the "Project Confirmation" template set out in Annex B.</p> <p><u>Habitat Credits</u>:</p> <p>Habitat credit valuation will be established specifically for each Habitat Banking Project. This valuation will include the unit of measure and the value of the credits to be deposited in the Habitat Bank. A description of the approach and the analysis performed will be included in the preparation of the "Project Confirmation" using the template set out in Annex B.</p> <p>Habitat Banking Projects will be recorded as a deposit into the Habitat Bank on the Habitat Credit Ledger upon completion of construction of the Habitat Banking Project using the template set out in Annex C.</p>
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Final draft: February 21, 2019

	<p>The actual productive value of a particular Habitat Banking Project will be determined immediately prior to its proposed use as credit to offset a development project.</p> <p>VFPA shall, either through ownership, lease, licence or other agreement, ensure that a Habitat Banking Project site is protected at least until the withdrawal of the habitat credits from the Bank that are associated with the Habitat Banking Project site.</p> <p><u>Third Parties:</u></p> <p>VFPA may develop Habitat Banking Projects for inclusion in the Habitat Bank in collaboration with third parties. Once included in the Habitat Bank, such Habitat Banking Projects will be treated in the same manner as other Habitat Banking Projects that have been placed into the Habitat Bank.</p> <p>VFPA may enter into agreements with third parties to allow withdrawal of habitat credits, as defined by this Arrangement, when such an agreement facilitates development activities that support VFPA in fulfilling its mandate.</p>
<b>Bank Establishment Date</b>	<p>July 31, 2012 for a five (5) year trial period under the terms of the Working Agreement, which was executed on September 10, 2012, and which was extended by the Participants to March 31, 2019, and which was replaced by this Arrangement for a term of fifteen (15) years from the date this Arrangement comes into effect.</p>



Final draft: February 21, 2019


## **ANNEX B**

### **FORM OF PROJECT CONFIRMATION**

The following document template (titled Project Confirmation) will be used to identify and confirm that a proposed Habitat Banking Project is appropriate and confirmed for development and deposit in the Habitat Bank.

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Final draft: February 21, 2019

 <b>Habitat Enhancement Program</b>	 <b>Fisheries and Oceans Canada</b> <b>Pêches et Océans Canada</b> <b><u>Project Confirmation</u></b>
<b>PROJECT NAME:</b>	

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### Terminology used:

- “**Arrangement**” refers to the arrangement between Fisheries and Oceans Canada and Vancouver Fraser Port Authority for the management and administration of the Vancouver Fraser Port Authority Habitat Bank
- “**DFO**” refers to Fisheries and Oceans Canada
- “**FPIP**” refers to *Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting (2013)*
- “**VFPA**” refers to Vancouver Fraser Port Authority
- “**Project**” refers to the proposed \_\_\_\_\_
- “**QEP**” refers to a Qualified Environmental Professional

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### Preamble:

In accordance with the Arrangement, this Project Confirmation will be used to confirm that:

- VFPA consulted and negotiated with DFO on the suitability of the above-referenced Project for habitat banking purposes.
- DFO agrees, in principle, that the above-referenced Project would be acceptable as fish habitat as identified herein.
- DFO agrees that the identified type of fish habitat and the approximate quantity of fish habitat would be suitable for habitat banking.
- The Project meets the terms of the Arrangement with regard to need, fish habitat, productivity, site location, feasibility/cost, and ownership/tenure.
- DFO acknowledges that VFPA has developed the project concept and will move to final design as identified in the attached drawings.

*This Project Confirmation is used to support the conditions and requirements of the Arrangement and does not alter or modify the Arrangement in any manner. This Project Confirmation will also be used to confirm that the Project, if constructed as proposed, meets the objectives of the FPIP. An assisted assessment has determined that a DFO regulatory review pursuant to the Fisheries Act is not required for the Project. This assessment was conducted by a QEP in accordance with guidance from DFO’s Projects Near Water web site and DFO’s “Science Advice for Managing Risk and Uncertainty in Operational Decisions of the Fisheries Protection Program” (2014). As would be expected for a viable habitat enhancement opportunity, this assessment concluded that the Project will not result in Serious Harm to fish that contribute to commercial, recreational or Aboriginal (CRA) fisheries.*

*As the Project proceeds, VFPA will maintain responsibility to ensure that the Project has undergone appropriate reviews and assessments, including those mandated by applicable environmental assessment legislation (e.g., Species at Risk Act, if applicable) and any other VFPA-mandated reviews and assessments.*

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<b>Project Overview:</b>	
<ul style="list-style-type: none"> <li>• <i>Description of the proposed project and how the proposed project will result in the creation of fish habitat that will provide long-term benefits for targeted species of fish such as salmon, aquatic species at risk or other species that may utilize the project area.</i></li> <li>• <i>Description and valuation of the ecological functions that the proposed project will include.</i></li> <li>• <i>Brief description of the proposed construction activities, including how they will be undertaken to avoid and mitigate any impacts to fish and fish habitat.</i></li> <li>• <i>Brief description of the proposed timing for project completion, including post-construction monitoring.</i></li> </ul>	
Water feature name:	
<b>Location of Works</b>	
Regional district/ land use authority:	
City/municipality:	
Lat./Long.	
Property ownership:	
<b>Description of Pre-Construction Values</b>	
<ul style="list-style-type: none"> <li>• <i>Description of pre-construction habitat values and conditions, including biophysical attributes</i></li> <li>• <i>Description of pre-construction use of the area, including site history as appropriate</i></li> </ul>	
<b>Description of Proposed Activities</b>	
<ul style="list-style-type: none"> <li>• <i>Detailed description of construction activities and design approach</i></li> <li>• <i>Includes attachment of design drawings, and proposed habitat area for construction</i></li> <li>• <i>Description of construction methodology and detailed mitigation measures</i></li> </ul>	
Overall work schedule:	
Least risk work window:	
<b>Potential Habitat Gains and Anticipated Affected Areas</b>	

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- *Description of habitat gains, and anticipated affected habitat, table format*

Habitat Type	Potential Habitat Gain (m <sup>2</sup> )	Anticipated Affected Habitat (m <sup>2</sup> )	Comments
<i>X Habitat Type</i>			
<b>Habitat Gains and Affected Habitat</b>			

### Fish Productivity Investment Policy Considerations

- *Description and high-level summary of how the proposed project is expected to comply with FPIP objectives, based on project characteristics, ecology of relevant fisheries species, fisheries management objectives, and any local restoration priorities.*
- *This includes a review of readily available online information including DFO fisheries management plans and other documents as required*
- *Description and rationale for how the proposed project meets the following 4 Principles of the FPIP:*
  - **Principle 1:** *Offsetting measures must support fisheries management objectives or local restoration priorities.*
    - *Rationale:*
  - **Principle 2:** *Benefits from offsetting measures must balance Project impacts.*
    - *Rationale:*
  - **Principle 3:** *Offsetting measures must provide additional benefits to the fishery.*
    - *Rationale:*
  - **Principle 4:** *Offsetting measures must generate self-sustaining benefits over the long-term.*
    - *Rationale:*

### Post Construction Monitoring Plan

- *An as-built survey will be provided to document and confirm the size of the created habitat, following construction.*
- *VFPA will ensure that post-construction monitoring is undertaken in accordance with standard DFO requirements to confirm that created fish habitats are functioning as intended.*
- *A Post-Construction Monitoring Plan for the Habitat Enhancement Program has been created to outline monitoring requirements for habitat banking project sites.*
- *Monitoring will include assessments of site stability, proper physical function, planting success, and achievement of the desired biological objectives.*
- *VFPA to provide an estimate of predicted time for the vegetation at the site to become well established*

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Attachments	
<ul style="list-style-type: none"><li>• <i>Design Drawings (attachment)</i></li></ul>	
<p>Signed on behalf of Vancouver Fraser Port Authority:</p>  <hr/> <p>Habitat Enhancement Program Vancouver Fraser Port Authority</p>	<p>Date: _____</p>

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## **ANNEX C**

### **HABITAT CREDIT LEDGER**

The following template shall be used to record and track the credits associated with each Habitat Banking Project that has been deposited in the Habitat Bank. The completed Habitat Credit Ledger will be submitted to DFO at the following frequency:

- with each Annual Report; and
- following a transaction in the Habitat Bank (withdrawal or deposit of credits).

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## **ANNEX D**

### **FORM OF PROGRESS REPORTS**

The following reports will be used to document and communicate the status of the Habitat Bank on an annual basis:

- Annual Report for VFPA's Habitat Bank; and
- Annual Habitat Monitoring Report for VFPA's Habitat Bank.

Each report will be submitted to DFO on annual basis and shall include the detail as provided in the following Outline of Content.

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Final draft: February 21, 2019

<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>1. Table of Contents</b>	
<b>2. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>3. Executive Summary</b>	<ul style="list-style-type: none"> <li>• Identification of purpose of Annual Report</li> <li>• Statement of commitment between Participants for a working relationship built on trust, accountability and information sharing</li> <li>• Overview of annual transactions and current credits</li> </ul>
<b>4. Introduction</b>	<ul style="list-style-type: none"> <li>• Background on the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>5. Administration of the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Tracking processes and responsibilities</li> <li>• Activities started/completed in Reporting Period</li> <li>• Annual Review</li> <li>• VFPA and DFO Liaison Activities</li> <li>• Achievements in Reporting Period</li> </ul>
<b>6. Credits in the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Summary of the credits in the Habitat Bank and the transaction that were performed in the reporting year</li> </ul>
<b>7. General Ledger</b>	<ul style="list-style-type: none"> <li>• Overview of the General Ledger</li> </ul>
<b>8. Habitat Balance Sheet</b>	<ul style="list-style-type: none"> <li>• Overview of the Habitat Balance Sheet</li> </ul>
<b>9. Anticipated Program for 20XX [Next Year]</b>	<ul style="list-style-type: none"> <li>• Projects Currently under Construction</li> <li>• Priority Projects for 20XX</li> </ul>
<b>10. Management Issues and Opportunities</b>	<ul style="list-style-type: none"> <li>• Challenges and issues encountered</li> <li>• Obstacles</li> <li>• Potential remedial measures for implementation next year</li> </ul>
<b>11. Indigenous Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of Indigenous engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>

Final draft: February 21, 2019

<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>12. Public and Key Stakeholder Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of public and key stakeholder engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Summary of VFPA and DFO Meetings in the Reporting Year
Appendix B	As-Built Reports
Appendix C	Credit Transaction Reports
Appendix D	Map of Sites in the Habitat Bank
Appendix E	General Ledger
Appendix F	Habitat Balance Sheet
Appendix G	Map of Sites Proposed for Next Year

Final draft: February 21, 2019

<b><u>ANNUAL HABITAT MONITORING REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<b><u>SECTION</u></b>	<b><u>CONTENT</u></b>
<b>1. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>2. Introduction</b>	<ul style="list-style-type: none"> <li>• Background of the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>3. Types of Monitoring</b>	<ul style="list-style-type: none"> <li>• Description of the various types of monitoring that is used for the administration of the Habitat Bank</li> </ul>
<b>4. 20XX Monitoring Results</b>	<ul style="list-style-type: none"> <li>• Overview of monitoring results for each Habitat Banking Project (Detailed reports are included in Appendix A)</li> </ul>
<b>5. Next Year's Habitat Monitoring Report</b>	<ul style="list-style-type: none"> <li>• Overview of next year's anticipated habitat monitoring</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Habitat Banking Project Monitoring Reports
Appendix B	Monitoring Status and Proposed Monitoring Schedule

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## **ANNEX E**

### **EXISTING PROJECTS**

The Habitat Banking Projects that are identified herein represent the status of the Habitat Bank and projects planned for the Habitat Bank as of the Effective Date of this Arrangement.

Table 1 – Habitat Banking Projects currently deposited in the Habitat Bank

Table 2 – Habitat Banking Projects that have been proposed by VFPA and accepted by DFO as appropriate for development and deposit into the Habitat Bank

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Final draft: February 21, 2019

**Table 1.0 – Habitat Banking Projects Deposited to VFPA Habitat Bank**

No.	SITE	LOCATION	BANKED AREA (m <sup>2</sup> )	STATUS
1.	Salt Marsh Restoration – TFN (3.1 & 3.2)	Delta (Tsawwassen)	6,635 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
2.	Salt Marsh Restoration - Boundary Bay (3.3, 3.4 & 3.5)	Delta (Boundary Bay)	56,357 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
3.	Glenrose Tidal Marsh	Delta	10,778 m <sup>2</sup> (tidal freshwater marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
4.	Riverfront Park Tidal Marsh	Vancouver	1,481 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
5.	Gladstone Park Tidal Marsh	Vancouver	3,181 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
6.	Timberland Basin Habitat	Surrey	1,146 m <sup>2</sup> / 2,777 m <sup>2</sup> (tidal freshwater marsh / tidal freshwater mudflat)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
7.	New Brighton Park Shoreline Habitat Restoration Project	Vancouver	9,872 m <sup>2</sup> (salt marsh, marine tidal channel & mudflat, cobble/boulder beach, and marine riparian)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>

Final draft: February 21, 2019

**Table 2.0 – Habitat Banking Projects Proposed by VFPA and accepted by DFO as appropriate for the Habitat Bank**

No.	SITE	LOCATION	APPROX. GROSS AREA (ha.)	STATUS
1.	Cates Landing Habitat Restoration	North Vancouver	~1.0 ha	• Complete
2.	Maplewood Marine Restoration Project	North Vancouver	~7.0 ha	• Permitting and approvals in progress
3.	Tsawwassen Eelgrass Project	Delta	~4.3 ha	• Permitting and approvals in progress
4.	South Arm Jetty Tidal Marsh Project	Richmond	~44.0 ha	• Permitting and approvals in progress
5.	Westham Island / Canoe Pass Tidal Marsh Project	Ladner	~4.0 ha	• Permitting and approvals in progress
6.	McDonald Tidal Marsh Project	Richmond	~2.8 ha	• Permitting and approvals in progress
7.	Point Grey Tidal Marsh Project	Vancouver	~41.0 ha	• To be advanced in future years
8.	Steveston Island Tidal Marsh Project	Richmond (Steveston)	~6.5 ha	• To be advanced in future years

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## **ANNEX F**

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: USE OF HABITAT CREDITS TO MEET OFFSETTING REQUIREMENTS OF A *FISHERIES ACT* AUTHORIZATION**

Consultation with Indigenous peoples is required when Fisheries and Oceans Canada (DFO) makes a regulatory decision that may adversely impact potential or established Aboriginal or treaty rights, Indigenous groups and their related interests. Under the fisheries protection provisions of the *Fisheries Act*, a regulatory decision occurs when DFO contemplates the decision to authorize a work, undertaking or activity under section 35(2)(b) of the *Fisheries Act*. Indigenous consultation will normally take place after DFO has received an Application for Authorization and determined that the information requirements set out in the *Applications for Authorization* under Paragraph 35(2)(b) of the *Fisheries Act Regulations* have been met.

DFO will consult on the work, undertaking or activity being authorized under section 35(2)(b) of the *Fisheries Act* and any other aspects of the Authorization that have the potential to adversely impact potential or established Aboriginal or treaty rights, and related interests. The goal of these consultations will be to identify measures to avoid, minimise, or if required accommodate for, potential impacts of the work, undertaking or activity on the rights or interests of Indigenous peoples through mitigation and offsetting to be incorporated into the Authorization.

As the purpose of utilizing habitat banking credits is to meet offsetting requirements of an Authorization issued under section 35(2)(b) of the *Fisheries Act*, the proposed use of habitat banking credits is subject to Indigenous consultation.

Final draft: February 21, 2019

## **ANNEX G**

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: HABITAT BANKING PROJECT DEVELOPMENT BY HEP**

#### **Overview and Purpose**

Indigenous consultation and engagement is a key element for the successful delivery of Habitat Banking Projects undertaken by VFPA's Habitat Enhancement Program (HEP). This Annex describes the process implemented by HEP for developing Habitat Banking Projects and identifies key points during the process for input and involvement by Indigenous groups. HEP's consultation and engagement with Indigenous groups aims to identify and address project-related impacts, to design and implement appropriate mitigation measures, and to explore opportunities for Indigenous involvement such as participation in field studies and/or employment, training and contracting. Subject to the discretion and direction of applicable regulatory agencies, including VFPA, HEP also aims to undertake consultation with Indigenous groups in accordance with the requirements of regulatory processes that are applicable to the Habitat Banking Project (such as VFPA's Project and Environmental Review Process).



Final draft: February 21, 2019

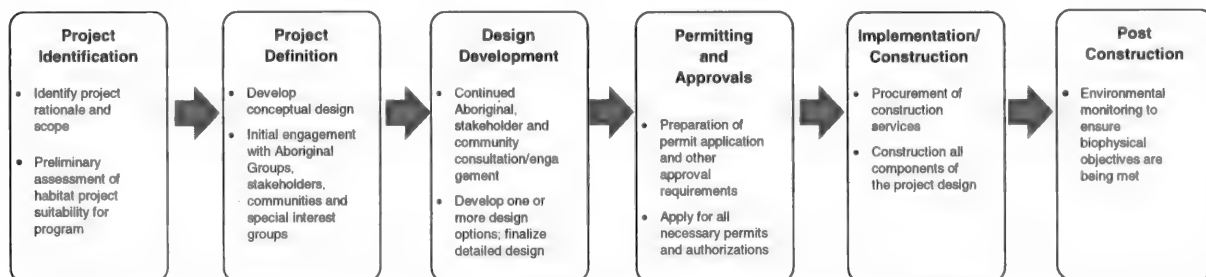
## Habitat Banking Project Development Process

The development of Habitat Banking Projects is achieved through six basic project management phases that are used to guide and control the project from start to finish.

Commencing with the identification of a potential project, the process provides for the structured development and advancement of all required components required for project delivery.

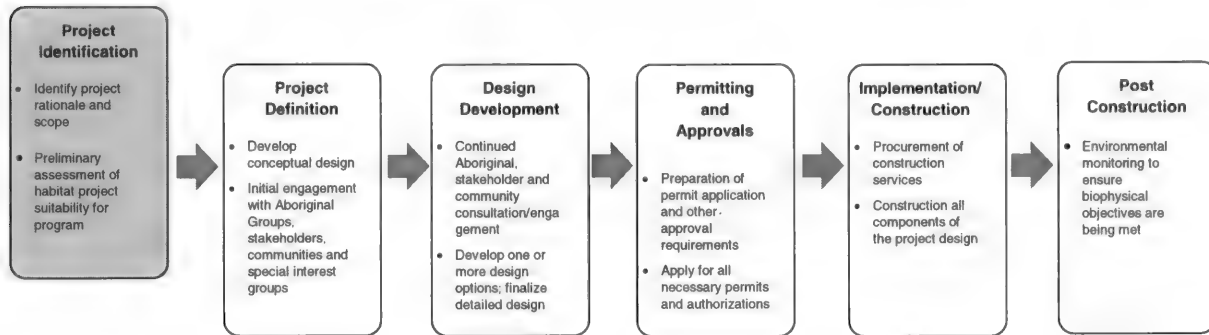
- Phase 1 (**Project Identification**) - The “idea” or the vision of what could be achieved.
- Phase 2 (**Project Definition**) - What are the project objectives? Constraints?
- Phase 3 (**Design Development**) - How will the project objectives be achieved?
- Phase 4 (**Permitting and Approvals**) - Obtaining formal permission to perform the work.
- Phase 5 (**Implementation/Construction**) - Construction of the habitat project.
- Phase 6 (**Post Construction**) - Ensuring long-term success of the habitat project.

The illustration below depicts these six key project management phases and provides the key tasks associated with each.



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## Phase 1 - Habitat Banking Project Identification



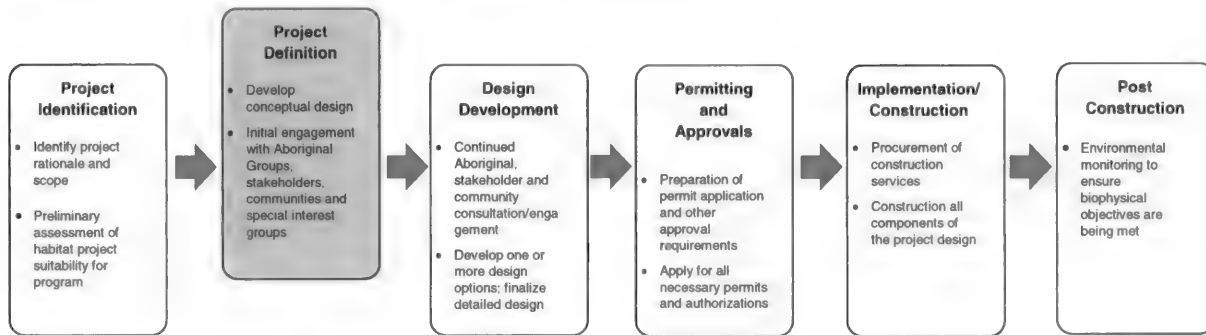
The identification of potential Habitat Banking Projects is a critical component of the project delivery process. Considerations include habitat need, habitat productivity, feasibility, cost, land tenure, DFO confirmation and Indigenous matters.

### Indigenous Consultation and Engagement

- *HEP seeks input from Indigenous groups on identification of potential habitat enhancement sites*
- *HEP seeks input from Indigenous groups on Habitat Banking Projects identified by others*
- *Indigenous groups share available traditional knowledge, information and studies*

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## Phase 2 - Habitat Banking Project Definition



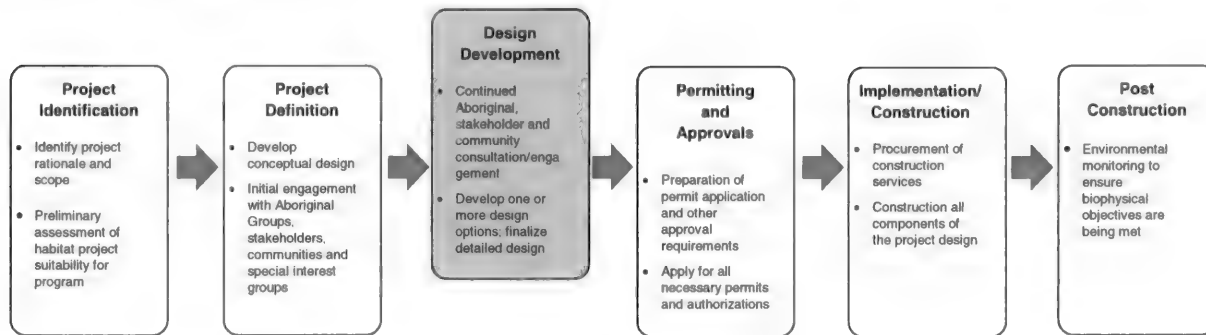
The development of conceptual designs is key in defining what a Habitat Banking Project could include. Using these concept designs, initial engagement and consultation on specific project features can commence.

### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on preferred engagement activities for project (e.g., Aboriginal Technical Design Committee)*
- *HEP consults Indigenous groups on project concept*
- *HEP identifies potential habitat values (i.e., credit estimates) that could be created and engages with interested Indigenous Groups*
- *Indigenous groups share Traditional Knowledge with HEP*
- *HEP identifies opportunity for involving Indigenous groups in field studies and assessments*
- *HEP commences planning for Indigenous involvement throughout project (e.g., contracting, employment and training opportunities)*

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## Phase 3 - Design Development



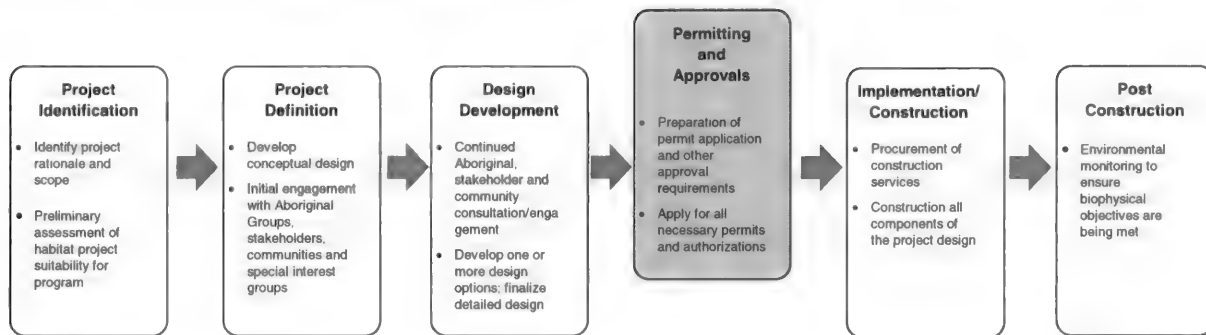
In the design phase, one or more designs are developed and evaluated. Through an iterative design process, a final design is selected and is refined to include all details necessary for construction.

### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on the design options*
- *HEP considers Indigenous feedback and refines design of project where appropriate (including selection of plant species)*
- *Where required, HEP undertakes further consultation with Indigenous groups on the design*
- *HEP finalizes the design*
- *HEP shares final design with Indigenous groups*
- *HEP confirms habitat values (i.e., credits) and consults with Indigenous groups*
- *HEP obtains DFO confirmation of appropriateness of habitat project for the Habitat Enhancement Program*
- *HEP plans for continued Indigenous involvement in subsequent phases*

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## Phase 4 - Permitting and Approvals



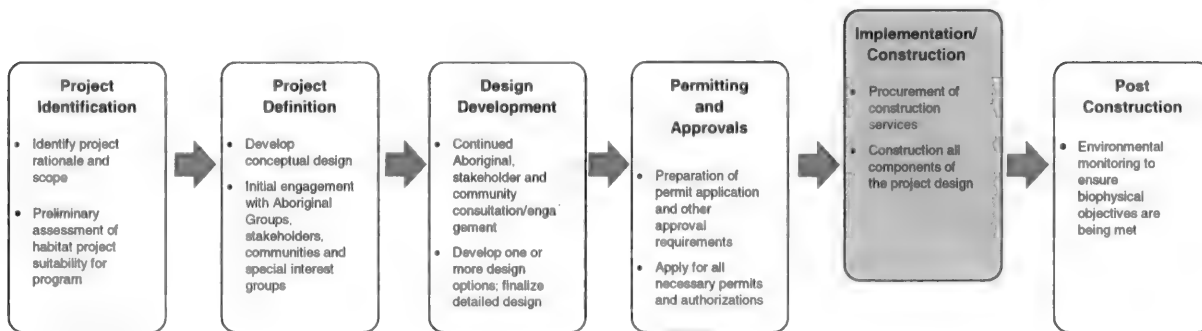
Permits and approvals that are required must be addressed on a project-by-project basis as regulatory requirements and land ownership can vary significantly.

### Indigenous Consultation and Engagement

- *HEP engages with Indigenous groups in relation to permits and approvals*
- *HEP develops a summary of permits and approvals required and shares with Indigenous groups*
- *HEP seeks Indigenous input and support on permit applications*
- *HEP notifies Indigenous groups on submission of permit applications*
- *Regulators and permitting authorities may undertake Indigenous consultation*
- *HEP plans for continued Indigenous involvement in subsequent phases*

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## Phase 5 - Implementation/Construction



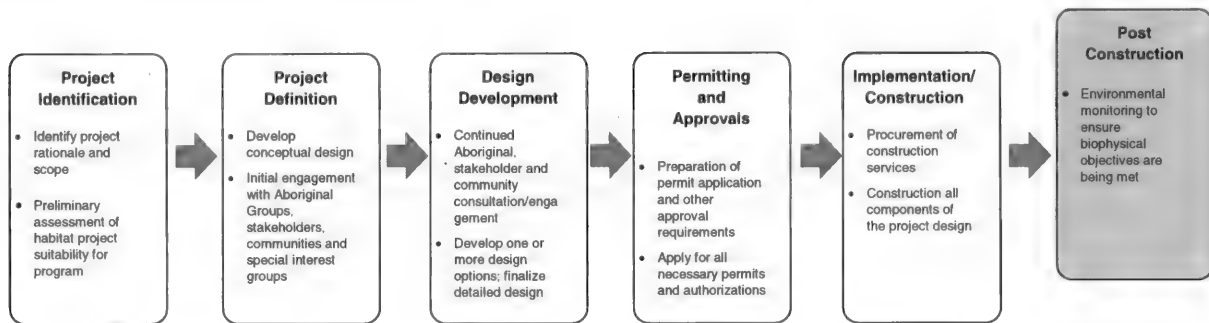
The Habitat Banking Project takes shape during the Implementation/Construction Phase.

### Indigenous Consultation and Engagement

- *HEP identifies approach to procurement and determines opportunities for Indigenous involvement/benefits*
- *HEP monitors conditions of approval/permits and any commitments to Indigenous groups*
- *HEP continues to keep Indigenous groups updated on progress of construction (e.g., sharing of construction monitoring reports)*
- *HEP plans for continued Indigenous involvement in Post Construction Phase*

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## Phase 6 - Post Construction



### Indigenous Consultation and Engagement

- *HEP considers opportunities for enhanced integration of Indigenous input and identification of priorities into planning for post construction monitoring*
- *HEP shares Post Construction Monitoring Plan with Indigenous groups*
- *Potential contracting opportunities for Indigenous groups (e.g., maintenance, monitoring)*
- *HEP explores opportunities for enhanced sharing of information (e.g., data collection such as potential DNA analysis, fish use data etc.)*
- *HEP engages Indigenous groups regarding other types of reporting that the HEP can share that communicates project benefits and information of importance to Indigenous communities*

## Hwang, Jason

---

**From:** Nutton, Byron  
**Sent:** February-27-19 9:23 AM  
**To:** Hwang, Jason  
**Subject:** VFPA habitat bank  
**Attachments:** VFPA habitat bank for discussion with Cheryl

Hey Jason,

Just to be complete and give you a sense of the history and the work done to date, please see the notes below on the negotiations towards a renewed Habitat Banking Arrangement with VFPA.

After reviewing VFPA's first proposal, I identified 10 issues, which I summarized and discussed with Al and Cheryl. I categorized them into Major (2) and Minor (8) issues.

The two Major issues were:

- Indigenous engagement
- Third party use of credits

It was a long road but, as already discussed and as included in the draft Briefing Note, with significant effort from Loriena and Suzanne I believe that these have been satisfactorily resolved.

After discussing the 8 Minor Issues with Al and Cheryl, they agreed with my recommendations that 5 were acceptable as proposed by VFPA but the remaining 3 required further discussion. Based on their direction I moved forward with negotiating those 3 remaining items: Information Sharing was resolved in the last round of substantial edits we put forward about a year ago, Service Area was linked to Indigenous Engagement and resolved as part of that discussion, and Term of the Arrangement goes like this – VFPA started with 30 years, Cheryl confirmed she was good with 10, VFPA subsequently came down to 25 and then 20...we seemed to be at an impasse so, as discussed, I have proposed 15 in the current draft. Further details on all 8 of these Minor Issues is included in the attached e-mail.

Lastly, the draft Briefing Note includes some discussion of Credit Valuation and Land Tenure – these two items are less related to renewal of the Arrangement and more related to the on-going day-to-day operations and administration of the Bank. Regardless, substantial conversation on these two items has occurred during our negotiations, and they have been topics of discussion between VFPA and DFO senior management, so it seems appropriate to include them in the Briefing Note.

Cheers,

*Byron Nutton, RPBio*

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268



**Hwang, Jason**

---

**From:** Nutton, Byron  
**Sent:** March-16-18 3:00 PM  
**To:** Magnan, Alain  
**Subject:** VFPA habitat bank for discussion with Cheryl

Hey Al,

**BACKGROUND:**

As a reminder, the last time we discussed this file the outstanding items for negotiation/discussion were:

Major Items:

- Indigenous engagement
- third party use of credits.

Minor Items:

- information sharing
- term of the agreement
- service area

I have attached, below, an updated (red text) list of all the minor items, including the ones previously resolved, for your reference.

**UPDATE:**

Suzanne, Loriena and I met with VFPA last Wednesday, March 7<sup>th</sup> to discuss progress on renewal of their program with a new Habitat Banking Arrangement.

We discussed their draft consultation Annex to be added to the Arrangement, outlining consultation that would take place when planning and constructing conservation projects for deposit to the bank, as well as a step confirming consultation at the time credits are withdrawn. VFPA is now updating that document, as well as preparing a draft plan for consultation on the Arrangement itself. In addition, VFPA is re-considering their proposed service area in the context of Indigenous engagement requirements (i.e. may be better to narrow back down the geographic area to what is in the current agreement to reduce the scope of engagement). They have indicated they will respond on these items by March 21st.

Suzanne and I committed to reviewing the latest draft of the Arrangement and providing comments by today - this has been completed. Comments focussed on third party use of credits and information sharing, but also included a few other minor improvements and editorial suggestions. Provided VFPA is good with our comments, these two items should be resolved...although we need to ensure that Cheryl is OK with the third party piece as this is not in line with the guidance.

We confirmed DFO's position regarding the proposed term of the arrangement (10 years) but VFPA continues to advocate for 20 years.

We did discuss the potential to consider another short-term extension to the current agreement, but VFPA would strongly prefer to have a new long-term arrangement in place.

Complete list of “minor” items previously identified:

### 1. Information Sharing

The template includes language that is very restrictive with respect to VFPA or DFO sharing information related to the Arrangement. VFPA has requested that this be broadened for several reasons, largely related to disclosure of information to indigenous groups, stakeholders and the public to facilitate engagement when considering conservation projects for development, and when considering the use of credits as offsetting for future development projects.

**Recommendation:** Further discussion with VFPA to develop new language that is less restrictive.

**FOLLOW-UP:** VFPA and DFO have included new wording in most recent draft of the Arrangement to accommodate our operational requirements.

### 2. Term of the Agreement

VFPA has requested a 20-year term for the Arrangement based on the effort involved in identifying potential sites; conducting indigenous, stakeholder and public engagement; developing detailed designs and plans; constructing the project; and monitoring to ensure success. The guidance and template do not specify an appropriate length for an Arrangement.

It is recognized that the development of conservation projects can take several years, however, a 20-year term seems overly long particularly given that this Arrangement has been developed based on interim guidance. It is likely that VFPA will be willing to negotiate on this point, but likely that they will oppose anything shorter than a 10-year term.

**Recommendation:** Propose a 10-year term.

**FOLLOW-UP:** DFO has identified a 10-year term in the draft Arrangement but VFPA continues to advocate for 20-year term.

### 3. “Orphaned” Credits

VFPA has proposed a clause that would, if the Arrangement is not renewed, allow any remaining credits to continue to be eligible for use under the terms of the Arrangement provided that VFPA is not in any breach of the Arrangement.

Given the investment involved, this does not seem unreasonable.

**Recommendation:** Accept VFPA proposal.

**RESOLVED - NO FURTHER ACTION REQUIRED.**

### 4. Legal Disclaimer

VFPA has proposed to remove the legal disclaimer that reads: *This Arrangement is an expression of the mutual intentions of the Participants and is not legally binding on them or enforceable against them.*

**Recommendation:** Reject VFPA’s proposal and retain the template legal disclaimer.

**RESOLVED - NO FURTHER ACTION REQUIRED.**

**5. Service Area**

VFPA has proposed a very broad scope – “the Fraser River Estuary and its tributaries, Burrard Inlet, the Strait of Georgia and its associated inlets and other areas as established from time to time as mutually agreed to by the Participants.” This is broader in scope than the existing Agreement. Although the proposed Service Area seems overly broad it may be reasonable, but a rationale should be provided. Definition of the Service Area may be linked with considerations related to Use of Credits and Indigenous Engagement, which will be discussed in a separate e-mail.

**Recommendation:** Further discussion with VFPA to review their requested Service Area, consider other options, and provide a rationale for a mutually agreeable Service Area.

**FOLLOW-UP:** VFPA is reconsidering their proposed service area in the context of Indigenous engagement requirements.

**6. Annex B: Conservation Project Plan**

As part of the existing Agreement, DFO and VFPA have developed a detailed project confirmation process, including the format for submission of proposed conservation projects. VFPA has proposed continuing to use this existing process and format instead of the format provided in the template.

**Recommendation:** Accept VFPA’s proposal.

**RESOLVED - NO FURTHER ACTION REQUIRED.**

**7. Annex D: Progress Reports**

As part of the existing Agreement, DFO and VFPA have developed a detailed reporting process, including the format for progress reports. VFPA has proposed continuing to use this existing process and format instead of the format provided in the template.

**Recommendation:** Accept VFPA’s proposal.

**RESOLVED - NO FURTHER ACTION REQUIRED.**

**8. Annex E: Existing Projects**

As part of the existing Agreement, VFPA has developed several conservation projects that are either completed or underway. VFPA has proposed that these existing conservation projects be carried forward to be managed under the new Arrangement.

**Recommendation:** Accept VFPA’s proposal.

**RESOLVED - NO FURTHER ACTION REQUIRED.**

## Hwang, Jason

---

**From:** Hwang, Jason  
**Sent:** February-27-19 11:41 AM  
**To:** Ko, Christina  
**Subject:** Accepted: VFPA Habitat bank - DRAFT BN v2

When: Feb 27, 2019 2:00:00 PM

Where: Teleconf#1-877-413-4781 ID: [REDACTED]

--

\*\*\* Brad prefers Wed, Feb 27 at 2pm time slot to discuss \*\*\* CK

Hi Brad.

There are 3 documents attached regarding the VFPA Habitat Banking agreement. I have reviewed these:

1. draft of the Briefing Note,
2. the current draft of the Arrangement (still a few minor items to tidy up)
3. the Indigenous engagement summary report

You had asked some questions previously that we have addressed:

1. the template Arrangement included in the guidance document has the RD (as opposed to the RDG) as the signatory;
2. Policy confirmed that there is no requirement for, and they have no capacity to support, a review from their shop.

Byron and I are able to brief you on Wednesday – I will ask Christina to set a time.

Jason

s.16(2)(c)

**Subject:** VFPA Habitat bank - DRAFT BN v2  
**Location:** Teleconf#1-877-413-4781 ID: [REDACTED]  
**Start:** Wed 2/27/2019 2:00 PM  
**End:** Wed 2/27/2019 2:30 PM  
**Show Time As:** Tentative  
**Recurrence:** (none)  
**Meeting Status:** Not yet responded  
**Organizer:** Ko, Christina  
**Required Attendees:** BRAD Fanos; Hwang, Jason; Nutton, Byron

\*\*\* Brad prefers Wed, Feb 27 at 2pm time slot to discuss \*\*\* CK

Hi Brad.

There are 3 documents attached regarding the VFPA Habitat Banking agreement. I have reviewed these:

1. draft of the Briefing Note,
2. the current draft of the Arrangement (still a few minor items to tidy up)
3. the Indigenous engagement summary report

You had asked some questions previously that we have addressed:

1. the template Arrangement included in the guidance document has the RD (as opposed to the RDG) as the signatory;
2. Policy confirmed that there is no requirement for, and they have no capacity to support, a review from their shop.

Byron and I are able to brief you on Wednesday – I will ask Christina to set a time.

Jason

s.16(2)(c)



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

Sector Name

French translation

Sector Head Title

French Translation

UNCLASSIFIED

20##-###-#####

EKME #: #####

MEMORANDUM FOR THE REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT  
BRANCH

**RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT WITH  
VANCOUVER FRASER PORT AUTHORITY  
(FOR DECISION)**

**SUMMARY OF ADVICE TO REGIONAL DIRECTOR, ECOSYSTEMS  
MANAGEMENT BRANCH**

The purpose of this note is to seek approval of a renewed Habitat Bank Arrangement (the Arrangement) with Vancouver Fraser Port Authority (VFPA).

If approved, the Arrangement will replace the current habitat banking Working Agreement established between the DFO and VFPA in 2012 and scheduled to expire on March 31, 2019, and will be valid for a period of 15 years, with provision for review every five years.

The Arrangement establishes the terms and conditions for the renewed management of the Port of Vancouver Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016).

Engagement and consultation with Indigenous groups with asserted or traditional territories or treaty lands within the service area of the Arrangement was jointly undertaken by DFO and VFPA. While few, the key concerns, issues and input received have been considered and the consultation process has been concluded. **NOTE: Byron will confirm whether or not additional feedback has been received since distribution of summary report.**

It is recommended that you approve and provide your signature to the renewed VFPA Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

## **BACKGROUND**

Over the past two years, since the release of *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016), DFO and VFPA have been negotiating an updated and renewed proponent-led Habitat Banking Arrangement to replace the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank* (2012).

The 2012 Agreement was set to expire in 2017, but was extended by letter to March 31, 2019 in order to allow for continued negotiation of a renewed Arrangement and for Indigenous engagement and consultation processes to be completed.

Several major considerations in the renewal of the Arrangement have been reconciled, including:

- Use of Credits by 3<sup>rd</sup> parties: The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.
- Credit valuation: The Interim Guide suggests that habitat credit valuation be mutually agreed up on based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction, with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.
- Land tenure: Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

.../3

The Tsleil-Waututh Nation declined to participate in the joint DFO-VFPA engagement process; however, the TWN has a new separate bi-lateral agreement with VFPA and no concerns have been brought forward that are specific to the Arrangement. **NOTE: Byron to follow up.**

### **EXTERNAL CONSULTATIONS**

No external consultations were conducted beyond the engagement with Indigenous groups documented above.

### **ADVICE AND RECOMMENDATIONS TO REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT BRANCH**

It is recommended that you approve and provide your signature to the renewed Port of Vancouver Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

---

Brad Fanos  
Director  
Fish and Fish Habitat Protection Program

- ☐ I concur with the recommendations
- ☐ I do not concur with the recommendations

---

Cheryl Webb  
Regional Director  
Ecosystem Management Branch

Attachment(s): (3) (if applicable)

- 1) Habitat Bank Arrangement: Port of Vancouver Habitat Bank
- 2) Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement





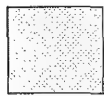
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GCCMS # : 20##-###-####  
EKME # : #####

To:  
Pour: Cheryl Webb

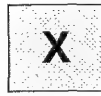
Date:

Object: **RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT**  
Objet: **WITH VANCOUVER FRASER PORT AUTHORITY**

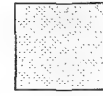
From / De: Brad Fanos, Director, Fish and Fish Habitat Protection Program



Material for the Minister  
Documents pour le Ministre



Your Signature  
Votre signature



Information

Remarks: This briefing note was developed in consultation with the following  
Remarques: regions/sectors: (please list who was consulted internally)

Distribution: *Please indicate name(s) of people to receive a copy  
following the RD approval. (Remove text if no Distribution is required)*

Drafting Officer/ Rédacteur:

NAME (TEL #) / Director / admin initials

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**Pages 2641 to / à 2655  
are duplicates of  
sont des duplicatas des  
pages 1693 to / à 1707**

## Pringle, Sarah

---

**From:** Webb, Cheryl  
**Sent:** February-27-19 3:25 PM  
**To:** Fanos, Brad  
**Cc:** Pringle, Sarah  
**Subject:** RE: 2 priority items for RD action

Brad, I am on a 3 hour call for TMX until 6. I am able to sign off the org charts tomorrow.

Happy to discuss after 6 or tomorrow am early.

C

---

**From:** Fanos, Brad  
**Sent:** Wednesday, February 27, 2019 3:16 PM  
**To:** Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>  
**Cc:** Pringle, Sarah <Sarah.Pringle@dfo-mpo.gc.ca>  
**Subject:** 2 priority items for RD action

Cheryl

Would like to get these items for your action asap:

1. Signoff Due this fri - Org chart signoff off for uploading to the national website along with all the other Regions.
  - a. NHQ has requested this and OCCOE will need this updated org to process a few position location and reporting changes. I can walk you through the few minor changes but I see nothing that is of concern.
  - b. I recommend sign off unless you wish to delegate to me. Please advise
2. Review and show stopper comments – March 4 - VFPA Habitat Banking agreement - I have reviewed with Jason and Byron and have some minor changes on BN but support the approach for third party use (with restrictions), credit valuations and agreement duration at 15 years with a review every 5 years and FN consultations
  - a. This will be finalized over the next week with VFPA and then run through our respective Groups for signoff – RD-EMB. Let me know if you see any serious issues as I think this updated agreement address our key risks.
  - b. See attached docs
  - c.

Perhaps we can discuss today?

**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**
**DATE:** February 28, 2019 (1pm Call)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING –** March 7 (10am Conference Call)

**ATTENDEES:**
**DFO Representatives:**

 Byron Nutton (BN), DFO  
 Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO)

**CURRENT MEETING ACTIONS (STATUS – after Feb 28/19 Call):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
<b>2019 Actions:</b>				
1.	Byron to reach out to [REDACTED] (TWN) regarding DFO's required 'close-out' related to engagement on VFPA-DFO Arrangement	DFO (BN)	March 5/19	BN reached out [REDACTED] the week of Feb 19 BN/ST have a meeting w TWN set for March 5 On Feb 28 BN requested VFPA provide a consultation summary log for engagement with TWN – VFPA requested for BN to have the March 5 meeting first, then this request would be re-evaluated DFO to close out
2.	BN requested VFPA prepare and provide a summary engagement/consultation log for Squamish Nation	VFPA (CO/JS)	Discuss March 7	JS to attend call on March 7 to clarify DFO request for SFN engagement log Forthcoming ASAP

**Best available copy**
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## Habitat Enhancement Program

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
3.	DFO and VFPA are committed to working toward a FINAL Arrangement, ready for signatures by March 8/19 at the latest	VFPA (CO) DFO (BN)	March 6	VFPA issued DFO a final draft version of the Arrangement Feb 13/19 DFO sent edits to VFPA on Feb 21/19, which VFPA incorporated into a final Arrangement and sent back to VFPA on Feb 26/19 BN sent grammar/comma edit to CO on Feb 28. VFPA awaiting any final DFO comments due March 6 EOD at latest.
4.	VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)	VFPA (CO)	Dependent on TWN, targeting by March 8	VFPA is currently still working with TWN to prepare a joint submission to DFO on this aspect. The submittal will include the MMRP Project Confirmation Document, as well as the MMRP Assisted Assessment.  Habitat Banking Values – go over on 14 <sup>th</sup> or 15 <sup>th</sup> , read and meet and chat and VFPA wants to go to tender asap VFPA didn't want to rush T'sleil Watuth – means that DFO will be RUSHED to review/ approve Digestion of approach is consistent w previous approaches 11:30AM - 12PM THURSDAY LITMUS test for VFPA on SCIENCE based on established science and metrics.

Best available copy

## Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Thursday, February 28, 2019 11:07 AM  
**To:** Nutton, Byron; Thorpe, Suzanne  
**Cc:** Ruffo, Gord  
**Subject:** Thursday Feb 28 Call (TODAY!) w VFPA - Agenda and Materials  
**Attachments:** 2019-02-28-03-600-VFPA-AGENDA-VFPA and DFO Liaison Meeting\_No 52-Rev0.docx; 2019-02-21-03-600-VFPA-HEP-DFO Meeting Actions-UPDATED FOR FEB 28-Rev1.docx

Hi Byron and Suzanne,

Ahead of our 1pm call today, attached is:

1. Agenda to guide the call
2. Actions List – status of items updated following our last call on Feb 21

Call number is in the Outlook invite, but just in case:

- +1-604-449-3026 (Vancouver)
- Attendee access code: [REDACTED]

Looking forward to speaking with you this afternoon.

Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

s.16(2)(c)

**Habitat Enhancement Program****DFO / VFPA Liaison Meeting:  
Conference Call – February 2019**

Meeting No. 52

**Location:** Conference Call (VFPA Vancouver Meeting Room)

**Date:** Thursday February 28th (1:00 PM– 2:00 PM)

**Attendees:**

Byron Nutton (DFO)  
Suzanne Thorpe (DFO)

Charlotte Olson (VFPA)  
Gord Ruffo (VFPA)

**AGENDA:**

- 1. Review of Agenda**
- 2. Priority Actions & Timelines – to support Arrangement execution by March 2019**
  - a) Status of IG Summary Report sent to IGs week of Feb 4<sup>th</sup>
    - Plan to finalize report
  - b) Discuss status of Timeline to execute new Arrangement in Q1 2019
    - VFPA issued a FINAL Arrangement dated Feb 21/19 to DFO on Feb 26/19 incorporating DFO's final edits (sent Feb 21)
    - Status of DFO Management review? VFPA requires any last comments by EOD Feb 28
    - Steps to execute Arrangement – starting March 1:
      1. VFPA to receive Executive approval and signatures first (starts immediately)
      2. VFPA to send original copy of final signed Arrangement to DFO to sign/execute (DFO to confirm that VFPA is to send signed Arrangement direct to Cheryl Webb?)
      3. DFO to send final executed original Arrangement back to VFPA
- 3. Other Items for Discussion**
- 4. Next Steps/Actions**



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pages 2322 to / à 2323**

**Nutton, Byron**

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**Subject:** Conference Call w VFPA RE Arrangement  
**Location:** Conference Call  
  
**Start:** Thu 2019-02-28 1:00 PM  
**End:** Thu 2019-02-28 2:00 PM  
  
**Recurrence:** (none)  
  
**Meeting Status:** Not yet responded  
  
**Organizer:** Olson, Charlotte

Hi Byron & Suzanne, as discussed please accept this 1pm Conference Call on Thursday February 28th to discuss our Arrangement Please send any final written edits/comments in advance of this call if possible. Thx!

Call In Details:

- \* +1-604-449-3026 (Vancouver)
- \* Attendee access code: [REDACTED]

Regards,  
Charlotte

s.16(2)(c)

## Thorpe, Suzanne

---

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Tuesday, March 5, 2019 10:43 AM  
**To:** Nutton, Byron; Thorpe, Suzanne; Scoble, Jemma; Ruffo, Gord  
**Subject:** Thursday March 7 Call w VFPA - Agenda and Materials  
**Attachments:** 2019-03-07-03-600-VFPA-AGENDA-VFPA and DFO Liaison Meeting\_No 53-Rev0.docx; 2019-02-28-03-600-VFPA-HEP-DFO Meeting Actions-UPDATED FOR MARCH 7-Rev0.docx

Hi Byron and Suzanne,

Ahead of our 10am conference call this Thursday March 7 (10am) – find attached:

1. Agenda to guide the call
2. Actions List – status of items updated following our last call on Feb 28

Jemma Scoble aims to join us on the call this Thursday.

Call number is in the Outlook invite, but just in case:

- +1-604-449-3026 (Vancouver)
- Attendee access code: [REDACTED]

Looking forward to hearing from you before then on any last comments on the Arrangement.

Regards,  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

s.16(2)(c)



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)



## Meeting Agenda

### Habitat Enhancement Program

#### DFO / VFPA Liaison Meeting: Conference Call – March 2019

Meeting No. 53

**Location:** Conference Call (VFPA Vancouver Meeting Room)

**Date:** Thursday March 7<sup>th</sup> (10:00 AM– 11:00 AM)

**Attendees:**

Byron Nutton (DFO)  
Suzanne Thorpe (DFO)

Charlotte Olson (VFPA)  
Gord Ruffo (VFPA)  
Jemma Scoble (VFPA)

#### **AGENDA:**

**1. Review of Agenda**

**2. Final Steps to Execute Arrangement**

- a) Status of IG Summary Report: sent to IGs week of Feb 4<sup>th</sup>
  - JS to provide update on any feedback, aim to finalize report week of March 11
- b) Byron to provide debrief of March 5 meeting with TWN to VFPA
- c) Final DFO Management comments on Arrangement due by EOD March 6
- d) Arrangement Execution Steps:
  - 1. VFPA to receive Executive approval and signatures first (starts immediately, assuming no major comments from DFO received by EOD March 6)
  - 2. VFPA to send original copy of final signed Arrangement to DFO to sign/execute  
**DFO to confirm if final signed Arrangement is to be sent to Cheryl Webb, OR Brad Fanos – provide address/details**
  - 3. DFO to send final executed original Arrangement back to VFPA

**3. Other Items for Discussion**

**4. Next Steps/Actions**

**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**
**DATE:** February 28, 2019 (1pm Call)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING –** March 7 (10am Conference Call)

**ATTENDEES:**
**DFO Representatives:**

Byron Nutton (BN), DFO  
Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO)

**CURRENT MEETING ACTIONS (STATUS – after Feb 28/19 Call):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
<b>2019 Actions:</b>				
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2.	BN requested VFPA prepare and provide a summary engagement/consultation log for Squamish Nation	VFPA (CO/JS)	Discuss March 7	JS to attend call on March 7 to clarify DFO request for SFN engagement log
3.	DFO and VFPA are committed to working toward a FINAL Arrangement, ready for signatures by March 8/19 at the latest	VFPA (CO) DFO (BN)	March 6	VFPA issued DFO a final draft version of the Arrangement Feb 13/19 DFO sent edits to VFPA on Feb 21/19, which VFPA incorporated into a final Arrangement and sent back to VFPA on Feb 26/19 BN sent grammar/comma edit to CO on Feb 28. VFPA awaiting any final DFO comments due March 6 EOD at latest.

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No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
4.	VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)	VFPA (CO)	Dependent on TWN, targeting by March 8	VFPA is currently still working with TWN to prepare a joint submission to DFO on this aspect. The submittal will include the MMRP Project Confirmation Document, as well as the MMRP Assisted Assessment.

No information has been removed or severed from this page

## Smith, Shona

---

**Subject:** FW: VFPA Habitat Bank  
**Location:** Board Room # 79  
  
**Start:** Tue 3/5/2019 2:00 PM  
**End:** Tue 3/5/2019 3:30 PM  
  
**Recurrence:** (none)  
  
**Meeting Status:** Accepted  
  
**Organizer:** [REDACTED]

Hey Suzanne and Shona,

As discussed, forwarding the invite for meeting with TWN.

Cheers,

Byron

-----Original Appointment-----

**From:** [REDACTED]  
**Sent:** 2019-February-27 6:04 PM  
**To:** [REDACTED] Nutton, Byron  
**Cc:** [REDACTED]  
**Subject:** VFPA Habitat Bank  
**When:** 2019-March-05 2:00 PM-3:30 PM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** Board Room # 79

Hi Byron,

We look forward to meeting with you on March 5 at 2 pm.

To get to our new building, take a right on 3178 Alder Court from Sleil-Waututh Road (left from Dollarton Highway heading east). You will drive by the TWN Community Centre/Gym on your right. There should be parking out front and I will meet you in the lobby for 2 pm.

Thanks and see you then,

[REDACTED]

s.19(1)

---

**From:** Nutton, Byron [mailto:Byron.Nutton@dfo-mpo.gc.ca]  
**Sent:** Tuesday, February 26, 2019 7:04 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Re: VFPA Habitat Bank

Thanks for getting back to me so quick.

I am available for 2:00 the afternoon of Tuesday, March 5th. I'm thinking an hour is probably enough, but I am free until the end of the day.

A call is good, but I could also come over and meet you in person if you'd prefer. Not sure if this warrants it on its own, but as our program moves forward (changes taking place here at DFO) I imagine we be working together more often and it certainly can't hurt to be better acquainted.

I'll leave it with you to decide what works best, just let me know.

Thanks,

Byron

Sent from my BlackBerry 10 smartphone on the Rogers network.

**From:** [REDACTED]  
**Sent:** Tuesday, February 26, 2019 4:48 PM  
**To:** Nutton, Byron  
**Cc:** [REDACTED]  
**Subject:** RE: VFPA Habitat Bank

Hi Byron,

We have been incredibly busy at the office so thank you for following-up with me again.

[REDACTED] I can join you on a call. We are available the afternoons of March 5, 6 or 7. Does 2 pm work for you on one of these days?

Thanks,



Treaty, Lands, and Resources Department  
Tsleil-Waututh Nation  
NEW ADDRESS  
3178 Alder Court  
North Vancouver, BC V7H 2V6

s.19(1)

Office: [REDACTED]  
Mobile: [REDACTED]

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**From:** Nutton, Byron [mailto:Byron.Nutton@dfo-mpo.gc.ca]  
**Sent:** Tuesday, February 26, 2019 4:38 PM  
**To:** [REDACTED]  
**Subject:** RE: VFPA Habitat Bank

[REDACTED]

I am just following up to see if you have had a chance to consider my e-mail below.

I do hope to hear from you at your earliest convenience.

Thank you,

Byron

**From:** Nutton, Byron  
**Sent:** 2019-February-20 4:09 PM  
**To:** [REDACTED]  
**Subject:** VFPA Habitat Bank

[REDACTED]

I am wondering if you have time to discuss with me a couple issues related to VFPA's habitat bank, specifically:

- renewal of the DFO-VFPA habitat bank arrangement; and
- VFPA's habitat banking project at Maplewood Flats.

I understand from VFPA that since the last time TWN, DFO and VFPA met together in May 2018 that you have been working with them on both of these items, and I am interested in re-connecting with TWN as I have not done so since [REDACTED]

Please let me know if you have some time to discuss these items – perhaps starting with a phone call to simply connect and plan for a more detailed discussion, if appropriate.

I look forward to hearing from you.

Thanks for your time,

*Byron Nutton, RPBio*

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Thursday, March 7, 2019 11:02 AM  
**To:** Nutton, Byron  
**Cc:** Thorpe, Suzanne; Ruffo, Gord; Scoble, Jemma  
**Subject:** Copy of Final Draft VFPA-DFO Habitat Bank Arrangement for TWN  
**Attachments:** 2019-02-21 Final Draft VFPA-DFO Habitat Bank Arrangement.pdf

**Importance:** High

Hi Byron

I spoke to our lawyer just now, and as expected, there are no concerns with you sharing the final draft VFPA-DFO Arrangement version with TWN, as you asked today.

Here attached is the final draft version (dated Feb 21/19), as a PDF for you to share.

As discussed, VFPA's contract/legal department is now finalizing the attached version to prepare a final sign-able document for Robin Silvester – it is anticipated that a March date will be applied to the final Arrangement once it goes through our contract department and is provided to DFO (Cheryl Webb) for final signature.

Please call if you'd like to discuss, Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

## Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Thursday, March 7, 2019 3:02 PM  
**To:** Nutton, Byron; Thorpe, Suzanne; Scoble, Jemma; Ruffo, Gord  
**Subject:** RE: Thursday March 7 Call w VFPA - Actions follow up  
**Attachments:** 2019-03-07-03-600-VFPA-HEP-DFO Meeting Actions-Rev0.docx

Hi guys, I've cleaned up the Actions from our call today, thanks again for the discussion & let me know if anything was missed.

We'll work to move the final Arrangement through our contracts department asap, and also to send along the requested Squamish Nation engagement log as soon as we can next week.

Thanks guys!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

CELL: 604.349.4111

**From:** Olson, Charlotte  
**Sent:** Tuesday, March 05, 2019 10:43 AM  
**To:** 'Nutton, Byron' <Byron.Nutton@dfo-mpo.gc.ca>; Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>; Ruffo, Gord <Gord.Ruffo@portvancouver.com>  
**Subject:** Thursday March 7 Call w VFPA - Agenda and Materials

Hi Byron and Suzanne,  
Ahead of our 10am conference call this Thursday March 7 (10am) – find attached:

1. Agenda to guide the call
2. Actions List – status of items updated following our last call on Feb 28

Jemma Scoble aims to join us on the call this Thursday.

Call number is in the Outlook invite, but just in case:

- +1-604-449-3026 (Vancouver)
- Attendee access code: [REDACTED]

Looking forward to hearing from you before then on any last comments on the Arrangement.

Regards,  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



s.16(2)(c)

**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place

Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

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**MEETING SUMMARY/ACTIONS: DFO/VFPA Liaison Meeting – Conference Call**
**DATE:** March 7, 2019 (10am Call)

**LOCATION:** Conference Call - VFPA Office (Vancouver Room)

**NEXT MEETING – March 14 (11:30am Conference Call)**
**ATTENDEES:**
**DFO Representatives:**

Byron Nutton (BN), DFO  
Suzanne Thorpe (ST), DFO

**Habitat Enhancement Program/VFPA Representatives:**

Gord Ruffo, VFPA (GR); Charlotte Olson, VFPA (CO); Jemma Scoble (JS)

**CURRENT MEETING ACTIONS (STATUS – after March 7/19 Call):**

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
2019 Actions:				
1.	Following March 5 meeting btw DFO and TWN, Byron to send [REDACTED] (TWN) a copy of current final version of VFPA-DFO Arrangement	DFO (BN)	March 8	BN/ST met with TWN on March 5. On March 7 BN asked VFPA of any concerns in sharing the current final draft Feb 21/19 version of Arrangement with TWN, VFPA confirmed no concerns on March 7, BN to send to TWN ASAP.
2.	Following March 5 meeting btw DFO and TWN, VFPA (JS) to send TWN a copy of the final Indigenous Engagement Summary Report	VFPA (JS)	Target by March 15, or following week	JS to send out to TWN when final report is sent out to all IGs.
3.	BN requested VFPA prepare and provide a summary engagement/consultation log for Squamish Nation related to the Arrangement	VFPA (CO/JS)	Target by March 15	JS to prepare the Squamish summary/engagement log and provide to CO to send to DFO.
4.	VFPA to finalize and sign final VFPA-DFO Arrangement, and send to DFO (Cheryl Webb) for signature	VFPA (CO) DFO (BN)	ASAP (by March 31)	On March 7 DFO (BN) confirmed VFPA could finalize Arrangement, and proceed with contract preparation for signature of Robin Silvester, followed by execution by Cheryl Webb.

No.	DESCRIPTION:	ACTION BY:	DUE DATE:	COMMENTS:
5.	<p>VFPA to provide DFO a Project Confirmation document for the proposed Maplewood Marine Restoration Project (e.g. habitat banking component)</p> <p>DFO to review &amp; discuss on March 14</p>	VFPA (CO)	<p>March 11</p> <p>Call on March 14</p>	<p>VFPA is currently still working with TWN to prepare a joint submission to DFO on this aspect. The submittal will include the MMRP Project Confirmation Document, as well as supporting document entitled MMRP QEP Assisted Assessment.</p> <p>Call setup for 11:30am on March 14 to discuss.</p>

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## Hwang, Jason

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**From:** Hwang, Jason  
**Sent:** March-11-19 2:02 PM  
**To:** Ko, Christina  
**Subject:** RE: DOCUMENTS REQUIRED: Port of Authorities VFPA

 I can follow up with him on the document for Brad first thing Tuesday.

Byron provided me with an update on this file late in the day on Friday. Here is what he sent:

I talked briefly with Brad on Wednesday and he had received nothing from Cheryl at that point. I advised him that:

- our meeting with TWN on Tuesday went well and we are expecting to receive follow-up correspondence from them confirming no objection to bank
- we were meeting with VFPA Thursday to provide any final comments
- VFPA is preparing Squamish summary
- I had reviewed/confirmed consistency with template language, in particular review-related clauses
- I confirmed that final Indigenous engagement report will not be on Port letterhead and that joint authorship is clearly stated in opening section

During our regularly scheduled meeting with VFPA on Thursday I advised I had not received any final comments, so VFPA is going ahead with preparing signature-ready copy to be sent up their line for signature.

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**From:** Ko, Christina <Christina.Ko@dfo-mpo.gc.ca>  
**Sent:** March-11-19 1:57 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Cc:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** DOCUMENTS REQUIRED: Port of Authorities VFPA

s.19(1)

Hi Jason

I haven't heard from Byron yet. Do you know when Brad will get these documents in regards to the Port Authorities VFPA?

Hopefully today?

Regards,  
**Christina Ko**

*Executive Assistant for the Director, Fish and Fish Habitat Protection Program  
Ecosystems Management Branch  
Fisheries and Oceans Canada / Government of Canada  
[Christina.Ko@dfo-mpo.gc.ca](mailto:Christina.Ko@dfo-mpo.gc.ca) / Tel: 604-666-2774 / Fax: 604-666-0417*

---

**From:** Ko, Christina  
**Sent:** Monday, March 11, 2019 9:04 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** Port of Authorities VFPA

Good morning Byron

Brad mentioned that he is waiting for documents from you in regards to the Pot of Authorities VFPA...for the RD to sign off.

Please advise, thank you!

Regards,  
**Christina Ko**

*Executive Assistant for the Director, Fish and Fish Habitat Protection Program  
Ecosystems Management Branch  
Fisheries and Oceans Canada / Government of Canada  
[Christina.Ko@dfo-mpo.gc.ca](mailto:Christina.Ko@dfo-mpo.gc.ca) / Tel: 604-666-2774 / Fax: 604-666-0417*

*Adjointe exécutive, Programme de la protection du poisson et de son habitat  
Gestion des écosystèmes  
Pêches et Océans Canada / Gouvernement du Canada  
[Christina.Ko@dfo-mpo.gc.ca](mailto:Christina.Ko@dfo-mpo.gc.ca) / Tél: 604-666-2774 / Telecopieur: 604-666-0417  
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## Hwang, Jason

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**From:** Nutton, Byron  
**Sent:** March-08-19 4:55 PM  
**To:** Hwang, Jason  
**Subject:** RE: call?

I talked briefly with Brad on Wednesday and he had received nothing from Cheryl at that point. I advised him that:

- our meeting with TWN on Tuesday went well and we are expecting to receive follow-up correspondence from them confirming no objection to bank
- we were meeting with VFPA Thursday to provide any final comments
- VFPA is preparing Squamish summary
- I had reviewed/confirmed consistency with template language, in particular review-related clauses
- I confirmed that final Indigenous engagement report will not be on Port letterhead and that joint authorship is clearly stated in opening section

During our regularly scheduled meeting with VFPA on Thursday I advised I had not received any final comments, so VFPA is going ahead with preparing signature-ready copy to be sent up their line for signature.

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**From:** Nutton, Byron  
**Sent:** 2019-March-08 9:59 AM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: call?

Will do.

---

**From:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Sent:** 2019-March-08 9:51 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Subject:** Re: call?

Hi Byron. My apologies. I am at a meeting in Vancouver so I can't make our call today. Maybe we can connect early next week. Can you send me a quick update on the VFPA agreement?

----- Original message -----

**From:** "Nutton, Byron" <Byron.Nutton@dfo-mpo.gc.ca>  
**Date:** 2019-03-08 9:43 AM (GMT-08:00)  
**To:** "Hwang, Jason" <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** call?

s.19(1)

Hey Jason,

If you still want to do our call now, give me about 5 minutes...or maybe you want to re-schedule or cancel altogether?

I don't really have anything too important, just a couple updates that I could send by e-mail anyway.

Cheers,

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices

Fisheries Protection Program | Programme de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

250-618-4268

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## Hwang, Jason

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**Subject:** VFPA agreement  
**Location:** Jason to call Byron  
  
**Start:** Tue 12/03/2019 9:00 AM  
**End:** Tue 12/03/2019 9:30 AM  
  
**Recurrence:** (none)  
  
**Meeting Status:** Meeting organizer  
  
**Organizer:** Hwang, Jason  
**Required Attendees:** Nutton, Byron

Just booking time for us to connect and make sure this is getting into our system.

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## Thorpe, Suzanne

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**From:** Thorpe, Suzanne  
**Sent:** Tuesday, March 12, 2019 10:37 AM  
**To:** Nutton, Byron  
**Subject:** RE: 2019-03-05\_DFO-TWN\_meeting-notes-HBA  
**Attachments:** 2019-03-11\_DFO-TWN\_ROD\_Engagement\_DFO-VFPA-HBA+MaplewoodFlatsHB.docx

Hi Byron;

Attached is the revised Record of Discussions w/r/t the engagement on the DFO-VFPA HBA with TWN.

Changes noted in red; minor edits already complete and accepted to remove red-line marks.

Have a look at the final copy and note if any additional changes are needed – I will finalize and either you or I can sent to TWN.

S.

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** Monday, March 11, 2019 4:11 PM  
**To:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** Re: 2019-03-05\_DFO-TWN\_meeting-notes-HBA

Yes, 2018 - thanks for catching that

Sent from my BlackBerry 10 smartphone on the Rogers network.

---

**From:** Thorpe, Suzanne  
**Sent:** Monday, March 11, 2019 3:59 PM  
**To:** Nutton, Byron  
**Subject:** RE: 2019-03-05\_DFO-TWN\_meeting-notes-HBA

B

A couple more items to check and finalize then I'll send you copy of the Record of Discussion tmo am.

... can you check the DATE of the previous meeting with TWN – just a double-check that – **the last TWN-DFO-VFPA meeting (May 25, 2018)** – you wrote 2019 so I just want to ensure you were looking at the right calendar.

Thanks.

S

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** Friday, March 8, 2019 5:00 PM  
**To:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** RE: 2019-03-05\_DFO-TWN\_meeting-notes-HBA

Thanks Suzanne,

Please finalize ASAP and send to me so that I can forward it along with the draft HBA to TWN.

Thanks,

Byron

**From:** Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>

**Sent:** 2019-March-07 4:03 PM

**To:** Smith, Shona <[Shona.Smith@dfo-mpo.gc.ca](mailto:Shona.Smith@dfo-mpo.gc.ca)>; Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>

**Subject:** RE: 2019-03-05\_DFO-TWN\_meeting-notes-HBA

Hi you two;

I had originally anticipated just keeping this as casual-type notes (internal only for tracking) and wasn't anticipating turning them into records, but upon reflection and based on the changes made, I think it is better to ensure that everyone has a common record. I'll take another look through and then put into a word document as a meeting record in preparation to share with TWN.

Additionally, we can ensure that the meeting is recorded using the ICT template (as possible). FYI Shona the template doesn't lend itself particularly to non-regulatory files but can still be used – I filled out a draft for the previous consultations completed (just to see how it worked) and we can discuss these once we have the record prepared more formally and accepted by TWN.

Chat soon!

Suzanne

**From:** Smith, Shona <[Shona.Smith@dfo-mpo.gc.ca](mailto:Shona.Smith@dfo-mpo.gc.ca)>

**Sent:** Thursday, March 7, 2019 3:28 PM

**To:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>; Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>

**Subject:** RE: 2019-03-05\_DFO-TWN\_meeting-notes-HBA

I think it might be appreciated if we share and ask for input. Just my two bits.

I also need to chat with you guys about saving this information as I am sure it will go into your HB files but we also need to track it now on our drive.

### Shona Smith

Client Liaison and Partnerships Coordinator, DFO  
Tel: 250-756-7256

**From:** Nutton, Byron

**Sent:** 2019-March-07 2:05 PM

**To:** Smith, Shona; Thorpe, Suzanne

**Subject:** RE: 2019-03-05\_DFO-TWN\_meeting-notes-HBA

My comments in blue, and strike-though. Is it worth sharing with TWN as a meeting summary???

If so, please have a look at it with that lens and make any additional refinements so that I can send as a draft to them when I send the draft Arrangement.

**From:** Smith, Shona <Shona.Smith@dfo-mpo.gc.ca>

**Sent:** 2019-March-07 12:40 PM

**To:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>

**Subject:** RE: 2019-03-05\_DFO-TWN\_meeting-notes-HBA

Hey Suzanne,

Looks great. I only added one point and it's not critical. See below in red.

## Shona Smith

Client Liaison and Partnerships Coordinator, DFO

Tel: 250-756-7256

---

**From:** Thorpe, Suzanne

**Sent:** 2019-March-06 3:47 PM

**To:** Nutton, Byron

**Cc:** Smith, Shona

**Subject:** 2019-03-05\_DFO-TWN\_meeting-notes-HBA

Hi Byron (and Shona);

As discussed. Provided below are the main discussion points from the March 5, 2019 meeting with T'sleil Watuth Nation (TWN).

### RE: Renewal of Habitat Banking Arrangement between VFPA and DFO:

- DFO explained context and intent to renew arrangement prior to 31 March 2019.
- TWN confirmed that since last TWN-DFO-VFPA meeting (May 25, 2019) they have ~~has~~ been apprised of the HBA through discussions they have held with VFPA and earlier copy of HBA (August 2018) was shared by VFPA to TWN.
- Discussed changes made to that draft since August (e.g., change in terminology from conservation projects to habitat banking projects, minor editorial changes) ~~use of 3<sup>rd</sup> party credits, engagement and consultation~~.
- DFO confirmed that measures to address previous concerns raised by TWN have been incorporated into HBA with one exception.
  - Sale of credits – addressed - under proposed new HBA VFPA would not be able to sell/transfer credits, but VFPA could use their credits on behalf of a third party as described in Annex A
  - Early engagement on habitat banking projects – addressed - included in Annex G (VFPA Engagement/Consultation process)
  - Consultation when habitat banking credits are used – not addressed - however unlikely, a situation could arise where DFO's scope of consultation on impacts related to a future Authorization might not include TWN, although credits from habitat banking project in TWN traditional territory are used as offsetting
- ~~TWN was made aware that impacts from projects could potentially be considered as offsets though the habitat bank (even if the impact site is located outside of local area) and that DFO is obligated to consult on the impacts from the project, not necessarily on the removal of the offset from the bank. Therefore, in TWN's agreement with VFPA, they may wish to consider if a "removal trigger" is warranted for TWN areas of overlap/ consultation areas; also to ensure "input trigger" is well defined by their agreement.~~
- TWN confirmed that they are also negotiating a separate TWN-VFPA agreement related to habitat banking, and would ensure that it address the outstanding item related to consultation when habitat banking credits are used
- ~~TWN-VFPA signed agreement with VFPA is anticipated prior to 31 March 2019. VFPA pressing for end of fiscal year.~~
- TWN would like to consider/ review: 1) draft final HBA, and 2) Indigenous Consultation Summary documents
- TWN will prepare correspondence for DFO to indicate that they are ok with the VFPA-DFO Arrangement and can turn this around relatively quickly, once documentation is received.



## **Fisheries and Oceans Canada (DFO) – Tsleil-Waututh Nation (TWN) Discussion on the Habitat Banking: Meeting Record**

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**V.O. Draft 2019-03-11**

**Date:** Tuesday, March 5, 2019

**Time:** 2 - 3:30pm

**Location:** Tsleil-Waututh Nation, People of the Inlet Office, 3075 Takaya Drive, North Vancouver, BC V7H 3A8

### **Participants:**

[REDACTED] TWN, [REDACTED]

[REDACTED] TWN, [REDACTED]

Byron Nutton, DFO, FPP Team Lead, Partnerships, Standards and Guidelines

Suzanne Thorpe, DFO, Senior Biologist, Partnerships, Standards and Guidelines

Shona Smith, DFO, Program Manager, Indigenous Consultation Team

### **Agenda Items:**

1. Proposed Habitat Bank Arrangement between VFPA and DFO
2. Maplewood Flats proposed Habitat Bank project by VFPA

### **Discussion:**

#### **RE: Renewal of Habitat Banking Arrangement between VFPA and DFO**

- DFO explained context and intent to renew their Habitat Bank Arrangement with Vancouver Fraser Port Authority (VFPA) prior to 31 March 2019.
- TWN confirmed that since the last TWN-DFO-VFPA meeting (May 25, 2018) they have been apprised of the HBA through discussions they have held with VFPA and an earlier copy of the VFPA-DFO HBA (draft August 2018) was shared by VFPA to TWN.
- DFO discussed the changes that have been made subsequent to the August draft (e.g., change in terminology from conservation projects to habitat banking projects, minor editorial changes).
- DFO confirmed that measures to address previous concerns raised by TWN have been incorporated into HBA, per below, with one exception.



- ✓ The optics surrounding the “sale” of credits are addressed under the proposed new HBA, VFPA would not be able to sell/transfer credits, but VFPA could use their credits on behalf of a third party as described in Annex A.
- ✓ Early engagement on the development of habitat banking projects is addressed and included in Annex G: Indigenous Consultation and Engagement: Habitat Banking Project Development by HEP (VFPA's Habitat Enhancement Program).
- ✓ Consultation upon contemplation of a regulatory decision is addressed in Appendix F: Indigenous Consultation and Engagement: Use of Habitat Credits to Meet Offsetting Requirements of a Fisheries Act Authorization.
- Consultation if/when habitat banking credits are used as offsets for projects located outside of the local area – not addressed. However unlikely, a situation could arise where DFO's scope of consultation on impacts related to a future Authorization might not include TWN, although credits from habitat banking project in TWN traditional territory are used as offsetting.
- TWN confirmed that they are also negotiating a separate TWN-VFPA agreement related to habitat banking, and would ensure that it address the outstanding item related to consultation when habitat banking credits are used
- TWN would like to consider/ review: 1) draft final HBA, and 2) Indigenous Consultation Summary documents
- TWN will prepare correspondence for DFO to indicate that they are ok with the VFPA-DFO Arrangement and can turn this around relatively quickly, once documentation is received.

**ACTION:** DFO to discuss sharing of documentation with VFPA and send to TWN. (Completed: Documentation will be shared, as requested).

#### **RE: Maplewood Flats (MF)**

- DFO is expecting to receive package re: banking aspects for MF project – as completely separate from the offsetting package Authorized for VFPA's Centerm Expansion.
- DFO will consider the appropriateness of the offsetting and any tangible benefits to fish and fish habitat from the proposed bank @ MF
- TWN expressed that justification is needed (e.g., channel-work) and fulsome explanations to facilitate their understanding the benefits; they are expecting a “net environmental gain” – which may include benefits to crab fishery, coho/chum/pink, eelgrass community, etc.; some noted concerns with use of productivity models.

**\*TWN is expecting DFO to complete technical review for habitat banking success and project benefits.\***

#### **RE: TWN programs**

- Services: archaeological assessments, environmental monitoring (mostly project related – construction/ site monitoring ... could consider long-term monitoring in future)
- Data collection: fish counts (Indian River), water quality information, forage fish surveys, eelgrass, count mapping, shore zone data collection; expanding to juvenile escapement/ netting & cumulative effects data collection) => issues with DATA HOUSING, but all Western Science data available for sharing.

- TWN is currently redrafting their stewardship policy. This policy guides TWN's decision making process with respect to all of the surface and subsurface air, land, water, cultural, and natural resources within the TWN consultation area.

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## Hwang, Jason

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**From:** Hwang, Jason  
**Sent:** March-12-19 12:27 PM  
**To:** Nutton, Byron  
**Subject:** VFPA??

Hi Byron – I don't think I have seen anything from you??

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## Hwang, Jason

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**From:** Hwang, Jason  
**Sent:** March-12-19 2:40 PM  
**To:** Fanos, Brad  
**Cc:** Nutton, Byron; Thorpe, Suzanne  
**Subject:** FW: VFPA Habitat Bank Arrangement  
**Attachments:** 2019-03-08\_VFPA\_HBA\_BN\_for\_Decision\_DRAFT.docx; 2019-02-21 Final Draft VFPA-DFO Habitat Bank Arrangement.pdf; 2019-02-01 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev0-FINAL DRAFT.pdf

Hi Brad. VFPA package attached in this email. Byron and Suzanne have done a great job keeping this on track and steering towards an outcome that works for everyone. Note the overview comments provided by Byron in the covering email below. If you have questions let us know. Jason

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** March-12-19 12:42 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Cc:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** VFPA Habitat Bank Arrangement

Jason, as discussed please see the attached updated draft Briefing Note, and “final drafts” of the Arrangement and the Engagement Summary.

The Briefing Note still requires file numbers on page 1, file numbers and additional information in the footer on pages 2-4, and the routing slip (page 5) needs to be completed – my understanding is that Christina Ko can do that stuff.

Please note that in reference to our engagement with Tsileil-Waututh, in follow-up to our March 5<sup>th</sup> meeting I am expecting written confirmation that they have no outstanding concerns but have drafted the Briefing Note as final in anticipation of receiving that confirmation.

The copy of the Arrangement is for review and information only – the copy to be signed is making its way through the VFPA sign-off process and will be delivered to Cheryl for final counter signature.

The Engagement Summary Report will be finalized and sent out to the participating Indigenous groups this week – the attached copy is the draft we circulated to participants for comment and to date we have not received any feedback that require changes.

With respect to the discussion points from our Feb 27 meeting with Brad:

- Term of Arrangement and 5-year review: I confirmed that the conditions related to the term and the review (and the entire arrangement overall) are consistent with the template provided in the guidance document. I reviewed the Briefing Note and confirmed that the use of the template is mentioned in the Summary box and again, this time with specific reference to the term and the 5-year review, in the Strategic Considerations section.
- Authorship of Engagement report: I confirmed with VFPA that cover page of final Engagement summary report (to be sent to Indigenous groups this week) will be the same as the final draft version attached, as opposed to being on VFPA letterhead, and I note that joint authorship is confirmed in Section 1: Overview.
- Squamish engagement: I am expecting a summary from VFPA on any additional attempts to engage with Squamish for our records, but it will not affect the outcome/adequacy of the engagement to date.

Let me know if you need anything further.

*Byron Nutton*, RPBio

A/Team Lead | Chef d'équipe Intérimaire

Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices

Fisheries Protection Program | Programme de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

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Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

Sector Name

French translation

Sector Head Title

French Translation

UNCLASSIFIED

20##-###-#####  
EKME #: #####

**Commented [MJ1]:** The GCCMS number will be generated after the docket is created

**Commented [MJ2]:** If a note is Protected B, Protected Solicitor Client Privilege, Confidential or Secret, please delete the EKME line. These types should not be saved in the system.

MEMORANDUM FOR THE REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT  
BRANCH

**RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT WITH  
VANCOUVER FRASER PORT AUTHORITY  
(FOR DECISION)**

**SUMMARY OF ADVICE TO REGIONAL DIRECTOR, ECOSYSTEMS  
MANAGEMENT BRANCH**

The purpose of this note is to seek approval of a renewed Habitat Bank Arrangement (the Arrangement) with Vancouver Fraser Port Authority (VFPA).

If approved, the Arrangement will replace the current habitat banking Working Agreement established between the DFO and VFPA in 2012 and scheduled to expire on March 31, 2019, and will be valid for a period of 15 years, with provision for review every five years.

The Arrangement establishes the terms and conditions for the renewed management of the Port of Vancouver Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016).

Engagement and consultation with Indigenous groups with asserted or traditional territories or treaty lands within the service area of the Arrangement was jointly undertaken by DFO and VFPA. While few, the key concerns, issues and input received have been considered and the consultation process has been concluded.

It is recommended that you approve and provide your signature to the renewed VFPA Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

## **BACKGROUND**

Over the past two years, since the release of *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016), DFO and VFPA have been negotiating an updated and renewed proponent-led Habitat Banking Arrangement to replace the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank* (2012).

The 2012 Agreement was set to expire in 2017, but was extended by letter to March 31, 2019 in order to allow for continued negotiation of a renewed Arrangement and for Indigenous engagement and consultation processes to be completed.

Several major considerations in the renewal of the Arrangement have been reconciled, including:

- Use of Credits by 3<sup>rd</sup> parties: The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.
- Credit valuation: The Interim Guide suggests that habitat credit valuation be mutually agreed upon based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction, with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.
- Land tenure: Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

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- 3 -

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### STRATEGIC CONSIDERATIONS

The existing Port of Vancouver Habitat Bank has been in place since September 2012 (approximately 6 ½ years) and is set to expire on March 31, 2019. The proposed new Arrangement establishes the terms and conditions for the renewed management of the Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016).

VFPA has maintained that the Habitat Bank is an important element of their overall business plan, and supports them in achieving their goal of ensuring that fish and fish habitat are considered in the development of the Asia-Pacific gateway.

Existing Fisheries Protection Program policies support habitat banking, and identify it as one mechanism that assists DFO in achieving its strategic outcome of *sustainable aquatic ecosystems*. In addition, the currently proposed amendments to the *Fisheries Act* include provisions that will formalize and further support habitat banking as an element of DFO's overall program delivery, should those amendments receive royal assent.

The proposed term of the Arrangement is 15 years, but consistent with the template provided in the guidance document it includes a provision for DFO to exercise an option to conduct a review every 5 years.

Significant effort has been invested by both DFO and VFPA over the past 2 ½ years conducting Indigenous engagement and negotiating the terms and conditions as proposed. Failure to execute the renewed Arrangement prior to the expiration of the current agreement on March 31<sup>st</sup> may jeopardize the continuation of the Port of Vancouver Habitat Bank.

### INDIGENOUS CONSULTATIONS

DFO and VFPA cooperatively developed and implemented an Indigenous engagement plan, and produced and distributed a report (*Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement*) documenting the engagement and providing responses to concerns brought forward.

Based on input received during the engagement process the following changes were incorporated into the Arrangement:

- DFO and VFPA agreed to change the standardized terminology from "conservation project" to "habitat banking project" in the final version of the Arrangement to better describe the purpose of the projects and to address Indigenous concerns related to the potential for "conservation" to be considered ahead of Indigenous interests.
- VFPA updated their framework for conducting consultation associated with future proponent-led habitat banking projects.

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The Tsleil-Waututh Nation (TWN) declined to participate in the joint DFO-VFPA engagement process; however, both VFPA and DFO have engaged with them separately. Concerns raised by TWN early on have been addressed in the drafting of terms and conditions the Arrangement and no additional concerns were raised at the most recent meeting on March 5, 2019.

#### **EXTERNAL CONSULTATIONS**

No external consultations were conducted beyond the engagement with Indigenous groups documented above.

#### **ADVICE AND RECOMMENDATIONS TO REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT BRANCH**

It is recommended that you approve and provide your signature to the renewed Port of Vancouver Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

\_\_\_\_\_  
Brad Fanos  
Director  
Fish and Fish Habitat Protection Program

- ☐ I concur with the recommendations
- ☐ I do not concur with the recommendations

\_\_\_\_\_  
Cheryl Webb  
Regional Director  
Ecosystem Management Branch

- Attachment(s):**
- 1) Habitat Bank Arrangement: Port of Vancouver Habitat Bank
  - 2) Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement

**Commented [MJ3]:** List all attachments and their EKME numbers. Ensure attachments are attached and label attachments with a tab corresponding to the number in this section.



Fisheries and Oceans Canada  
Correspondence Routing Slip

Fiche d'acheminement de correspondance  
Pêches et Océans Canada

UNCLASSIFIED  
GCCMS # : 20##-###-####  
EKME # : #####

To: Cheryl Webb  
Pour:

Date:

**Commented [MJ4]:** Do not input date. This is to be dated once all parties have approved the note.

Object: **RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT**  
Objet: **WITH VANCOUVER FRASER PORT AUTHORITY**

From / De: Brad Fanos, Director, Fish and Fish Habitat Protection Program

**Commented [D5]:** For SEP and Oceans, include Brigid's information in this section.

<input type="checkbox"/> Material for the Minister Documents pour le Ministre	<input checked="" type="checkbox"/> Your Signature Votre signature	<input type="checkbox"/> Information
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Remarks: This briefing note was developed in consultation with the following  
Remarques: regions/sectors: (please list who was consulted internally)

**Commented [MJ6]:** Any SMEs/Additional Approvers who provided input or assisted in the development of this note.

Please ensure each individual listed in this section has initialled beside their name prior to bringing the docket to the RD.

Distribution: Please indicate name(s) of people to receive a copy following the RD approval. (Remove text if no Distribution is required)

**Commented [MJ7]:** List any individuals who should receive a copy once approved. This is a great tool to use if you need to inform individuals about a docket, but whom do not need to be consulted during the development of the note.

Drafting Officer/ Rédacteur: NAME (TEL #) / Director / admin initials

**Commented [MJ8]:** Please fill this section in the same format provided. The Director should be Cheryl for FPP/SARA dockets and Brigid for Oceans/SEP dockets.

Final draft: February 21, 2019

**Habitat Bank Arrangement:**

**PORT OF VANCOUVER HABITAT BANK**

Between

**VANCOUVER FRASER PORT AUTHORITY**

AND

**HER MAJESTY THE QUEEN IN RIGHT OF CANADA**, as represented by the Minister of  
Fisheries and Oceans on behalf of Fisheries and Oceans Canada (“DFO”)

●xxxxxx, 2019

**PATH Number: 19-HPAC-00125**

Final draft: February 21, 2019

## 1. INTRODUCTION

This document sets out the principles of the mutual understanding between **Vancouver Fraser Port Authority ("VFPA")** and Fisheries and Oceans Canada ("DFO") (hereafter referred to as "the Participants") for the **Port of Vancouver Habitat Bank ("Habitat Bank")**.

### WHEREAS:

- a. Fisheries and Oceans Canada (DFO) is responsible for the administration of the *Fisheries Act*, more specifically the fisheries protection provisions including sections 6, 20, 21, 35, 37, and 38 related to the conservation and protection of Canada's marine and freshwater fisheries resources and their habitats from the impact of human activities. The purpose of the fisheries protection provisions, as set out in section 6.1 of the *Fisheries Act*, is to provide for the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries;
- b. DFO is responsible for the administration of the *Species at Risk Act* ("SARA") with respect to aquatic species other than those individuals in or on federal lands administered by the Parks Canada Agency and, in that capacity, the Minister of Fisheries and Oceans has powers and duties with respect to protecting aquatic species listed under that Act and providing for their recovery;
- c. The Fisheries Protection Policy Statement's goal is to promote compliance with the *Fisheries Act* in order to contribute to the purpose set out in section 6.1 of the *Fisheries Act*;
- d. This Arrangement does not commit DFO to the authorization of any future work, undertaking or activity requiring an authorization under paragraph 35(2)(b) of the *Fisheries Act*, or permit any future project requiring a permit under sections 73 and 74 of the *Species at Risk Act*. All future projects will be reviewed on their own merit and a decision on whether to authorize or permit will be made independent of the existence of a habitat bank arrangement. This Arrangement, and any related communications between DFO and VFPA do not constitute a representation or commitment of any kind regarding authorization of any future projects by DFO. This Arrangement, and any related communications, moreover does not constitute a commitment that any habitat credits that may be issued will be acceptable in the context of future applications for *Fisheries Act* authorizations or SARA permits.
- e. VFPA is a port authority established by the Government of Canada pursuant to the *Canada Marine Act* and is accountable to the federal Minister of Transport. VFPA has a mandate to facilitate Canada's trade objectives, ensuring goods are moved safely, while protecting the environment and considering local communities. In fulfilling the mandate, VFPA carries out a variety of duties, including infrastructure development to support growth and efficient operations. The Habitat Bank can support such infrastructure development when habitat credits are acceptable in the context of future *Fisheries Act* authorizations or SARA permits.

- f. The Participants entered into a Working Agreement dated July 31, 2012 (“Working Agreement”) relating to the procedures for development and operation of a VFPA-led habitat bank for a five (5) year trial period which was extended by the Participants to March 31, 2019;
- g. VFPA has undertaken several habitat creation and enhancement projects in consultation with DFO pursuant to the Working Agreement, which are included in Annex E (“Existing Projects”); and
- h. This Arrangement will replace the Working Agreement and the Existing Projects will be managed pursuant to this Arrangement.

**THEREFORE**, the Participants agree to the following arrangement (“Arrangement”).

## **2. PURPOSE**

To support VFPA in fulfilling its mandate (referred to in paragraph e above) by facilitating infrastructure development when habitat credits from the Habitat Bank can be applied to meet future offsetting requirements for such development.

To replace the Working Agreement with this Arrangement and to establish revised principles for the continuation and management of the Habitat Bank by:

- establishing a working relationship between the Participants based on trust, accountability and information sharing;
- establishing a clear understandable Arrangement for managing the Habitat Bank; and
- increasing certainty in the administration of the Habitat Bank.

## **3. OTHER GENERAL INFORMATION**

The activities carried out under this Arrangement will be consistent with:

- *Fisheries Protection Policy Statement* (2013);
- *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting* (2013);
- *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October, 2016);
- any relevant Species at Risk Recovery Strategies and management considerations; and
- any relevant Fisheries Management Objectives.

#### **4. SCOPE**

The scope of this Arrangement is limited to the continuation and administration of the Habitat Bank described in Annex A, and including Habitat Banking Projects proposed in accordance with Annex B and the Existing Projects (described in Annex E). For the purposes of this Arrangement, a “Habitat Banking Project” shall mean a “conservation project” as defined in *Fisheries Protection Program’s Interim Guide to Proponent-led Habitat Banking* (October, 2016).

#### **5. ROLES AND RESPONSIBILITIES**

The roles and responsibilities of the VFPA are:

- Jointly managing the performance of the Arrangement with DFO;
- Identifying, designing, constructing, monitoring, maintaining, and protecting Habitat Banking Project sites;
- Meeting all other applicable federal, territorial, provincial and municipal requirements that apply to Habitat Banking Projects;
- Reporting on performance of Habitat Banking Projects;
- Accurately maintaining a copy of the habitat credit ledger; and
- Preparing and submitting Progress Reports for the Arrangement.

The roles and responsibilities of DFO are:

- Jointly managing the performance of the Arrangement with VFPA;
- Reviewing, providing advice and confirming Habitat Banking Project proposals;
- Reviewing Progress Reports, validating habitat credit balances in the habitat credit ledger, and processing habitat credit ledger transactions;
- Verifying the reported results of Habitat Banking Project performance in the Progress Reports;
- When appropriate, carrying out direct monitoring (i.e., a site visit to gather and analyse samples or information in order to directly verify compliance and effectiveness) and/or carrying out indirect monitoring (i.e., an assessment of information provided in Progress Reports to verify compliance and effectiveness) of Habitat Banking Project sites; and
- Reviewing and processing Progress Reports of the Arrangement.

The Participants shall fulfill their responsibilities under this Arrangement in accordance with the provisions of federal, provincial and territorial laws and regulations that govern their activities. Should a Participant not be able to perform a function under this Arrangement, the affected Participant will immediately contact the other signatories of this Arrangement so that early resolution can be reached.

## **6. MANAGEMENT PROVISIONS**

This Arrangement establishes the following management provisions for the administration of the Habitat Bank:

- The accountability lies with the office of signatories of the Arrangement: Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.
- The day to day administration of the Arrangement will be carried out by: Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region.

## **7. ADMINISTRATION OF THE HABITAT BANK ARRANGEMENT**

- Specific details related to the principles of the administration and operation of the Habitat Bank are included in Annex A;
- Habitat Banking Projects that are proposed for development are to be submitted for review and confirmation by DFO using the “Project Confirmation” template set out in Annex B;
- Habitat credits held within the Habitat Bank shall be tracked using the “Habitat Credit Ledger” template and frequency set out in and described in Annex C;
- Progress Reports shall be prepared and submitted annually in accordance with the requirements of Annex D;
- Existing Projects that were either constructed or proposed for construction under the terms of the Working Agreement are identified in Annex E; and
- Indigenous consultation and engagement related to the use of habitat credits is described in Annex F.

## **8. SHARING OF INFORMATION**

While this Arrangement is in effect and at all times thereafter, each of DFO and VFPA and any officers, employees or agents of each of them shall treat all information, data, documents, reports and materials acquired or to which access have been given in the course of, or incidental to, the performance of this Arrangement as confidential, subject to the federal *Access to Information Act* and the *Privacy Act*. With the exception of the Arrangement, the annexes to the Arrangement and annual Progress Reports, which VFPA may disclose from time to time, the Participants shall not disclose or permit to be disclosed such information, data, documents, reports and materials, unless:

- the Participants agree to the disclosure;
- the disclosure is part of the application and review process of VFPA’s Project and Environmental Review for a proposed Habitat Banking Project, which would include disclosure of project-specific information, engagement information for

public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;

- the disclosure is part of the application and review process by DFO for a proposed development project that would utilize habitat banking credits as offsetting, which would include disclosure of project-specific information, engagement information for public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of an application and review process of other regulatory agencies (such as Environment and Climate Change Canada for Disposal at Sea permit or exemption) for a proposed Habitat Banking Project, which would include disclosure only as required by such agencies;
- the disclosure relates to consultation and engagement with Indigenous groups as part of the Indigenous Consultation and Engagement Process set out in Annex G;
- the disclosure is to a third party as part of the Habitat Bank Administration as described in Annex A;
- the disclosure is required by law;
- the information was obtained from the public; or
- the information is available to the public.

## **9. CONSULTATION AND ENGAGEMENT**

The Participants will collaborate on an approach to meaningfully engage and consult with Indigenous groups having regard to the process being undertaken by VFPA's Habitat Enhancement Program for the development of Habitat Banking Projects and the involvement of Indigenous groups that is described in Annex G.

## **10. DIFFERENCES IN INTERPRETATION AND APPLICATION**

The Participants will endeavor to resolve issues regarding the implementation of this Arrangement in a timely manner using mechanisms available to the Participants. Where an issue remains unresolved, the pre-eminent jurisdiction responsible for the matter under consideration will make the final determination and seek concurrence from Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.

## **11. PROGRESS REPORTS**

The VFPA will prepare progress reports using the form described in Annex D ("Progress Report") on the achievements and challenges encountered during the reporting period of this Arrangement as it relates to the purposes identified in section 2 of this Arrangement.

The Progress Report should be submitted within ninety (90) calendar days from the conclusion of each year. A year will be considered to run from January 1 to December 31.



The Progress Report will be submitted to the Office of signatories of the Arrangement, Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region, for their concurrence.

All Progress Reports will conform to the requirements set out in Annex D.

## **12. REVIEW**

At the end of each five (5) year period during which this Arrangement is in effect, the Regional Director, Ecosystems Management, DFO Pacific Region, may establish a review team consisting of Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region, or an appropriately qualified and mutually agreed to third party to review the effectiveness of activities under this Arrangement. This review team will report to the Regional Director, Ecosystems Management, DFO Pacific Region, within six (6) months of being established.

## **13. AMENDMENT**

The Arrangement may be amended at any time in writing and by mutual consent of the Participants. An amendment will be confirmed by an exchange of letters, signed by the Participants, setting out the amendment and its effective date.

## **14. FINANCIAL ARRANGEMENT**

This Arrangement will not impose any additional financial responsibilities on the Participants, except that each Participant will be responsible for the staff and funding costs it incurs in its own interests, related to the support of the Arrangement.

## **15. DURATION, WITHDRAWAL AND TERMINATION**

This Arrangement is in effect from the date first written above for a period of fifteen (15) years. VFPA can request renewal of the Arrangement for an additional defined term (of no less than five (5) years) by providing one year's written notice to the other Participant. If this Arrangement is not renewed at the expiration of the term or a renewal, and provided that VFPA is not in breach of this Arrangement, the Participants will continue to apply the terms of this Arrangement to all Habitat Banking Projects that are either deposited in the Habitat Bank or have been confirmed by DFO in accordance with Annex B.

## **16. LEGAL DISCLAIMER**

This Arrangement is an expression of the mutual intentions of the Participants and is not legally binding or enforceable against them.

## **17. NOTICE**

All notices to be given under this Arrangement shall be in writing and shall be sent by prepaid registered mail or electronic transmission addressed to the Party entitled to receive the same, or delivered to such party as follows:

- if to VFPA:

Vancouver Fraser Port Authority (VFPA)  
100 The Pointe  
999 Canada Place  
Vancouver, British Columbia  
V6C 3T4

Attention: Director, Container Terminal Construction  
E-mail:

with a copy to:

Attention: Director, Legal Services  
E-mail:

- if to DFO:

Fisheries and Oceans Canada (DFO)  
Pacific Region, Ecosystems Management Branch  
Suite 200 – 401 Burrard Street  
Vancouver, BC  
V6C 3S4

Attention: Regional Director  
E-mail:

## **18. GENERAL**

VFPA is entering into this Arrangement on its own behalf and not as agent of Her Majesty in Right of Canada.

Final draft: February 21, 2019

## EFFECTIVE DATE AND SIGNATURE

This Arrangement has been signed by the Regional Director of DFO Pacific Region of Fisheries and Oceans on behalf of Her Majesty the Queen in Right of Canada and by the VFPA on the dates noted below.

SIGNED IN THE PRESENCE OF:

FOR HER MAJESTY THE QUEEN IN RIGHT OF CANADA

\_\_\_\_\_  
Cheryl Webb  
Regional Director  
Ecosystems Management  
DFO Pacific Region

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

FOR VANCOUVER FRASER PORT AUTHORITY

\_\_\_\_\_  
Robin Silvester  
President and CEO

\_\_\_\_\_  
Witness (as to both)

\_\_\_\_\_  
Mark Gustafson  
Corporate Secretary

\_\_\_\_\_  
Date

This Arrangement comes into effect on the date that both Participants have signed above.

Final draft: February 21, 2019

## **ANNEX A**

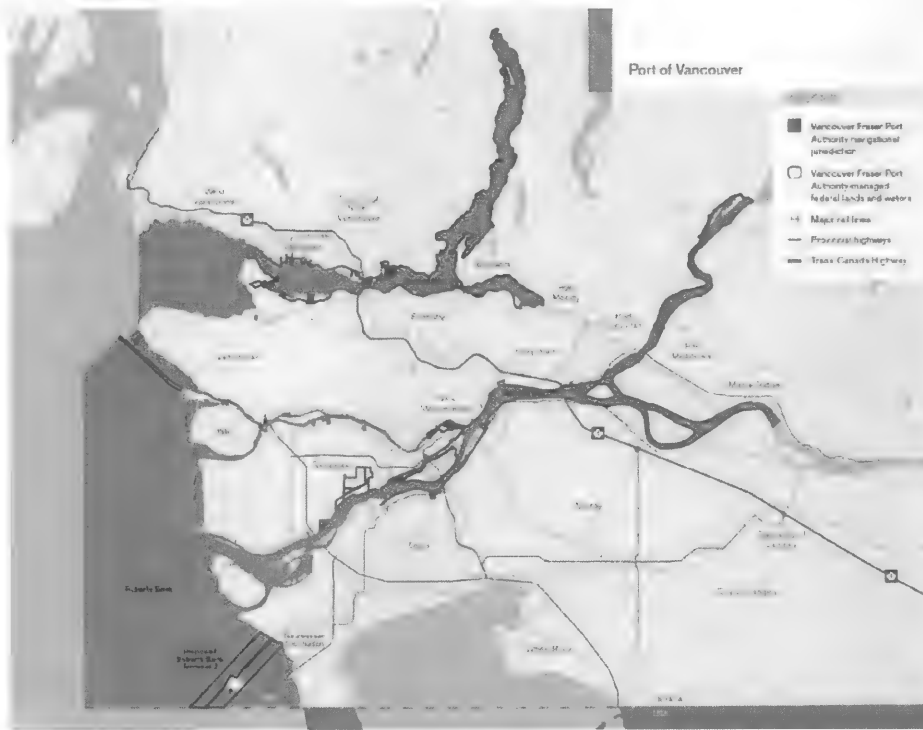
### **HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK**

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Final draft: February 21, 2019

## ANNEX A:

### HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK

Information Required	Description
<b>Habitat Bank Location (“Service Area”)</b>	<p>The Service Area of the Habitat Bank will include Habitat Banking Projects situated geographically within the lands and waters managed by VFPA and within the navigational jurisdiction of VFPA pursuant to its Letters Patent, as amended from time to time. The Service Area includes the Fraser River Estuary and its tributaries, Burrard Inlet, the Strait of Georgia and its associated inlets (See Figure 1.0 below) and will include other areas as established from time to time as mutually agreed to by the Participants.</p> <p>Figure 1.0 Service Area of the Habitat Bank</p> 
<b>Habitat Bank Administration</b>	<p>The Habitat Bank is a long-term initiative, comprised of Habitat Banking Projects, that is used to proactively create, restore or enhance fish habitat to benefit fish and wildlife species. Consistent with VFPA’s mandate, this enables VFPA to balance future infrastructure development opportunities with a healthy environment.</p> <p><u>Site Selection:</u> Habitat Banking Projects for the Habitat Bank will generally be selected based on the following considerations and criteria:</p>

	<p>(a) <u>Need</u>: Locations characterized by low productive capacity for species and stocks of interest or species at risk will be considered as a priority for the Habitat Bank. The intent is to develop or improve habitat capacity in the Service Area where habitat is needed and in support of applicable DFO policies.</p> <p>(b) <u>Habitat Productivity</u>: Emphasis will be placed on creation of high value habitat types that support a large number of ecological services and species functions (e.g., eelgrass beds and low marshes). The value of productivity will be assessed in the context of “need” (see (a) above).</p> <p>(c) <u>Site location</u>: Sites for the Habitat Bank will be selected based on their proximity to potential development areas with significant or rare ecological habitats or where onsite habitat compensation opportunities may be limited.</p> <p>(d) <u>Feasibility and cost</u>: Coastal zone processes, river hydraulics, biological productivity and ecological functioning are amongst the factors that will be used to determine the feasibility of habitat creation. In some areas it may not be possible to achieve stable self-functioning habitat due to ongoing influences of physical processes. Further, some habitat creation options may be possible but only at extreme high cost. Consideration may be given if these habitat types are critical for endangered or threatened species and the habitat credit applied to the Habitat Bank recognizes the increased cost of development.</p> <p>Through regular liaison meetings between DFO and VFPA representatives, potential Habitat Banking Projects will be identified and discussed.</p> <p>DFO’s confirmation of the appropriateness of a proposed Habitat Banking Project for inclusion in the Habitat Bank will be achieved through submitting the project for review and confirmation by DFO using the “Project Confirmation” template set out in Annex B.</p> <p><u>Habitat Credits</u>:</p> <p>Habitat credit valuation will be established specifically for each Habitat Banking Project. This valuation will include the unit of measure and the value of the credits to be deposited in the Habitat Bank. A description of the approach and the analysis performed will be included in the preparation of the “Project Confirmation” using the template set out in Annex B.</p> <p>Habitat Banking Projects will be recorded as a deposit into the Habitat Bank on the Habitat Credit Ledger upon completion of construction of the Habitat Banking Project using the template set out in Annex C.</p>
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Final draft: February 21, 2019

	<p>The actual productive value of a particular Habitat Banking Project will be determined immediately prior to its proposed use as credit to offset a development project.</p> <p>VFPA shall, either through ownership, lease, licence or other agreement, ensure that a Habitat Banking Project site is protected at least until the withdrawal of the habitat credits from the Bank that are associated with the Habitat Banking Project site.</p> <p><u>Third Parties:</u></p> <p>VFPA may develop Habitat Banking Projects for inclusion in the Habitat Bank in collaboration with third parties. Once included in the Habitat Bank, such Habitat Banking Projects will be treated in the same manner as other Habitat Banking Projects that have been placed into the Habitat Bank.</p> <p>VFPA may enter into agreements with third parties to allow withdrawal of habitat credits, as defined by this Arrangement, when such an agreement facilitates development activities that support VFPA in fulfilling its mandate.</p>
<b>Bank Establishment Date</b>	<p>July 31, 2012 for a five (5) year trial period under the terms of the Working Agreement, which was executed on September 10, 2012, and which was extended by the Participants to March 31, 2019, and which was replaced by this Arrangement for a term of fifteen (15) years from the date this Arrangement comes into effect.</p>



## **ANNEX B**

### **FORM OF PROJECT CONFIRMATION**

The following document template (titled Project Confirmation) will be used to identify and confirm that a proposed Habitat Banking Project is appropriate and confirmed for development and deposit in the Habitat Bank.

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 <b>PORT of vancouver</b> Habitat Enhancement Program	 <b>Fisheries and Oceans Canada</b> <b>Pêches et Océans Canada</b> <u><b>Project Confirmation</b></u>
<b>PROJECT NAME:</b>	

### Terminology used:

- “**Arrangement**” refers to the arrangement between Fisheries and Oceans Canada and Vancouver Fraser Port Authority for the management and administration of the Vancouver Fraser Port Authority Habitat Bank
- “**DFO**” refers to Fisheries and Oceans Canada
- “**FPIP**” refers to *Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting* (2013)
- “**VFPA**” refers to Vancouver Fraser Port Authority
- “**Project**” refers to the proposed \_\_\_\_\_
- “**QEP**” refers to a Qualified Environmental Professional

### Preamble:

In accordance with the Arrangement, this Project Confirmation will be used to confirm that:

- VFPA consulted and negotiated with DFO on the suitability of the above-referenced Project for habitat banking purposes.
- DFO agrees, in principle, that the above-referenced Project would be acceptable as fish habitat as identified herein.
- DFO agrees that the identified type of fish habitat and the approximate quantity of fish habitat would be suitable for habitat banking.
- The Project meets the terms of the Arrangement with regard to need, fish habitat, productivity, site location, feasibility/cost, and ownership/tenure.
- DFO acknowledges that VFPA has developed the project concept and will move to final design as identified in the attached drawings.

*This Project Confirmation is used to support the conditions and requirements of the Arrangement and does not alter or modify the Arrangement in any manner. This Project Confirmation will also be used to confirm that the Project, if constructed as proposed, meets the objectives of the FPIP. An assisted assessment has determined that a DFO regulatory review pursuant to the Fisheries Act is not required for the Project. This assessment was conducted by a QEP in accordance with guidance from DFO’s Projects Near Water web site and DFO’s “Science Advice for Managing Risk and Uncertainty in Operational Decisions of the Fisheries Protection Program” (2014). As would be expected for a viable habitat enhancement opportunity, this assessment concluded that the Project will not result in Serious Harm to fish that contribute to commercial, recreational or Aboriginal (CRA) fisheries.*

*As the Project proceeds, VFPA will maintain responsibility to ensure that the Project has undergone appropriate reviews and assessments, including those mandated by applicable environmental assessment legislation (e.g., Species at Risk Act, if applicable) and any other VFPA-mandated reviews and assessments.*

<b>Project Overview:</b>	
<ul style="list-style-type: none"> <li><i>Description of the proposed project and how the proposed project will result in the creation of fish habitat that will provide long-term benefits for targeted species of fish such as salmon, aquatic species at risk or other species that may utilize the project area.</i></li> <li><i>Description and valuation of the ecological functions that the proposed project will include.</i></li> <li><i>Brief description of the proposed construction activities, including how they will be undertaken to avoid and mitigate any impacts to fish and fish habitat.</i></li> <li><i>Brief description of the proposed timing for project completion, including post-construction monitoring.</i></li> </ul>	
Water feature name:	
<b>Location of Works</b>	
Regional district/ land use authority:	
City/municipality:	
Lat./Long.	
Property ownership:	
<b>Description of Pre-Construction Values</b>	
<ul style="list-style-type: none"> <li><i>Description of pre-construction habitat values and conditions, including biophysical attributes</i></li> <li><i>Description of pre-construction use of the area, including site history as appropriate</i></li> </ul>	
<b>Description of Proposed Activities</b>	
<ul style="list-style-type: none"> <li><i>Detailed description of construction activities and design approach</i></li> <li><i>Includes attachment of design drawings, and proposed habitat area for construction</i></li> <li><i>Description of construction methodology and detailed mitigation measures</i></li> </ul>	
Overall work schedule:	
Least risk work window:	
<b>Potential Habitat Gains and Anticipated Affected Areas</b>	

- *Description of habitat gains, and anticipated affected habitat, table format*

Habitat Type	Potential Habitat Gain (m <sup>2</sup> )	Anticipated Affected Habitat (m <sup>2</sup> )	Comments
X Habitat Type			
<b>Habitat Gains and Affected Habitat</b>			

### Fish Productivity Investment Policy Considerations

- *Description and high-level summary of how the proposed project is expected to comply with FPIP objectives, based on project characteristics, ecology of relevant fisheries species, fisheries management objectives, and any local restoration priorities.*
- *This includes a review of readily available online information including DFO fisheries management plans and other documents as required*
- *Description and rationale for how the proposed project meets the following 4 Principles of the FPIP:*
  - **Principle 1:** *Offsetting measures must support fisheries management objectives or local restoration priorities.*
    - *Rationale:*
  - **Principle 2:** *Benefits from offsetting measures must balance Project impacts.*
    - *Rationale:*
  - **Principle 3:** *Offsetting measures must provide additional benefits to the fishery.*
    - *Rationale:*
  - **Principle 4:** *Offsetting measures must generate self-sustaining benefits over the long-term.*
    - *Rationale:*

### Post Construction Monitoring Plan

- *An as-built survey will be provided to document and confirm the size of the created habitat, following construction.*
- *VFPA will ensure that post-construction monitoring is undertaken in accordance with standard DFO requirements to confirm that created fish habitats are functioning as intended.*
- *A Post-Construction Monitoring Plan for the Habitat Enhancement Program has been created to outline monitoring requirements for habitat banking project sites.*
- *Monitoring will include assessments of site stability, proper physical function, planting success, and achievement of the desired biological objectives.*
- *VFPA to provide an estimate of predicted time for the vegetation at the site to become well established*

Attachments	
• <i>Design Drawings (attachment)</i>	
<p>Signed on behalf of Vancouver Fraser Port Authority:</p>  <hr/> <p>Habitat Enhancement Program Vancouver Fraser Port Authority</p>	<p>Date: _____</p>

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## **ANNEX C**

### **HABITAT CREDIT LEDGER**

The following template shall be used to record and track the credits associated with each Habitat Banking Project that has been deposited in the Habitat Bank. The completed Habitat Credit Ledger will be submitted to DFO at the following frequency:

- with each Annual Report; and
- following a transaction in the Habitat Bank (withdrawal or deposit of credits).

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## **ANNEX D**

### **FORM OF PROGRESS REPORTS**

The following reports will be used to document and communicate the status of the Habitat Bank on an annual basis:

- Annual Report for VFPA's Habitat Bank; and
- Annual Habitat Monitoring Report for VFPA's Habitat Bank.

Each report will be submitted to DFO on annual basis and shall include the detail as provided in the following Outline of Content.

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<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<b><u>SECTION</u></b>	<b><u>CONTENT</u></b>
<b>1. Table of Contents</b>	
<b>2. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>3. Executive Summary</b>	<ul style="list-style-type: none"> <li>• Identification of purpose of Annual Report</li> <li>• Statement of commitment between Participants for a working relationship built on trust, accountability and information sharing</li> <li>• Overview of annual transactions and current credits</li> </ul>
<b>4. Introduction</b>	<ul style="list-style-type: none"> <li>• Background on the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>5. Administration of the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Tracking processes and responsibilities</li> <li>• Activities started/completed in Reporting Period</li> <li>• Annual Review</li> <li>• VFPA and DFO Liaison Activities</li> <li>• Achievements in Reporting Period</li> </ul>
<b>6. Credits in the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Summary of the credits in the Habitat Bank and the transaction that were performed in the reporting year</li> </ul>
<b>7. General Ledger</b>	<ul style="list-style-type: none"> <li>• Overview of the General Ledger</li> </ul>
<b>8. Habitat Balance Sheet</b>	<ul style="list-style-type: none"> <li>• Overview of the Habitat Balance Sheet</li> </ul>
<b>9. Anticipated Program for 20XX [Next Year]</b>	<ul style="list-style-type: none"> <li>• Projects Currently under Construction</li> <li>• Priority Projects for 20XX</li> </ul>
<b>10. Management Issues and Opportunities</b>	<ul style="list-style-type: none"> <li>• Challenges and issues encountered</li> <li>• Obstacles</li> <li>• Potential remedial measures for implementation next year</li> </ul>
<b>11. Indigenous Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of Indigenous engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>



Final draft: February 21, 2019

<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>12. Public and Key Stakeholder Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of public and key stakeholder engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Summary of VFPA and DFO Meetings in the Reporting Year
Appendix B	As-Built Reports
Appendix C	Credit Transaction Reports
Appendix D	Map of Sites in the Habitat Bank
Appendix E	General Ledger
Appendix F	Habitat Balance Sheet
Appendix G	Map of Sites Proposed for Next Year

<b><u>ANNUAL HABITAT MONITORING REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<u>SECTION</u>	<u>CONTENT</u>
<b>1. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>2. Introduction</b>	<ul style="list-style-type: none"> <li>• Background of the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>3. Types of Monitoring</b>	<ul style="list-style-type: none"> <li>• Description of the various types of monitoring that is used for the administration of the Habitat Bank</li> </ul>
<b>4. 20XX Monitoring Results</b>	<ul style="list-style-type: none"> <li>• Overview of monitoring results for each Habitat Banking Project (Detailed reports are included in Appendix A)</li> </ul>
<b>5. Next Year's Habitat Monitoring Report</b>	<ul style="list-style-type: none"> <li>• Overview of next year's anticipated habitat monitoring</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Habitat Banking Project Monitoring Reports
Appendix B	Monitoring Status and Proposed Monitoring Schedule

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## **ANNEX E**

### **EXISTING PROJECTS**

The Habitat Banking Projects that are identified herein represent the status of the Habitat Bank and projects planned for the Habitat Bank as of the Effective Date of this Arrangement.

Table 1 – Habitat Banking Projects currently deposited in the Habitat Bank

Table 2 – Habitat Banking Projects that have been proposed by VFPA and accepted by DFO as appropriate for development and deposit into the Habitat Bank

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Final draft: February 21, 2019

**Table 1.0 – Habitat Banking Projects Deposited to VFPA Habitat Bank**

No.	SITE	LOCATION	BANKED AREA (m <sup>2</sup> )	STATUS
1.	Salt Marsh Restoration – TFN (3.1 & 3.2)	Delta (Tsawwassen)	6,635 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
2.	Salt Marsh Restoration - Boundary Bay (3.3, 3.4 & 3.5)	Delta (Boundary Bay)	56,357 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
3.	Glenrose Tidal Marsh	Delta	10,778 m <sup>2</sup> (tidal freshwater marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
4.	Riverfront Park Tidal Marsh	Vancouver	1,481 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
5.	Gladstone Park Tidal Marsh	Vancouver	3,181 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
6.	Timberland Basin Habitat	Surrey	1,146 m <sup>2</sup> / 2,777 m <sup>2</sup> (tidal freshwater marsh / tidal freshwater mudflat)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
7.	New Brighton Park Shoreline Habitat Restoration Project	Vancouver	9,872 m <sup>2</sup> (salt marsh, marine tidal channel & mudflat, cobble/boulder beach, and marine riparian)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>

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**Table 2.0 – Habitat Banking Projects Proposed by VFPA and accepted by DFO as appropriate for the Habitat Bank**

No.	SITE	LOCATION	APPROX. GROSS AREA (ha.)	STATUS
1.	Cates Landing Habitat Restoration	North Vancouver	~1.0 ha	• Complete
2.	Maplewood Marine Restoration Project	North Vancouver	~7.0 ha	• Permitting and approvals in progress
3.	Tsawwassen Eelgrass Project	Delta	~4.3 ha	• Permitting and approvals in progress
4.	South Arm Jetty Tidal Marsh Project	Richmond	~44.0 ha	• Permitting and approvals in progress
5.	Westham Island / Canoe Pass Tidal Marsh Project	Ladner	~4.0 ha	• Permitting and approvals in progress
6.	McDonald Tidal Marsh Project	Richmond	~2.8 ha	• Permitting and approvals in progress
7.	Point Grey Tidal Marsh Project	Vancouver	~41.0 ha	• To be advanced in future years
8.	Steveston Island Tidal Marsh Project	Richmond (Steveston)	~6.5 ha	• To be advanced in future years

**Table 1.0 – Habitat Banking Projects Deposited to VFPA Habitat Bank**

No.	SITE	LOCATION	BANKED AREA (m <sup>2</sup> )	STATUS
1.	Salt Marsh Restoration – TFN (3.1 & 3.2)	Delta (Tsawwassen)	6,635 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
2.	Salt Marsh Restoration - Boundary Bay (3.3, 3.4 & 3.5)	Delta (Boundary Bay)	56,357 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
3.	Glenrose Tidal Marsh	Delta	10,778 m <sup>2</sup> (tidal freshwater marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
4.	Riverfront Park Tidal Marsh	Vancouver	1,481 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
5.	Gladstone Park Tidal Marsh	Vancouver	3,181 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
6.	Timberland Basin Habitat	Surrey	1,146 m <sup>2</sup> / 2,777 m <sup>2</sup> (tidal freshwater marsh / tidal freshwater mudflat)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
7.	New Brighton Park Shoreline Habitat Restoration Project	Vancouver	9,872 m <sup>2</sup> (salt marsh, marine tidal channel & mudflat, cobble/boulder beach, and marine riparian)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>

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## **ANNEX G**

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: HABITAT BANKING PROJECT DEVELOPMENT BY HEP**

#### **Overview and Purpose**

Indigenous consultation and engagement is a key element for the successful delivery of Habitat Banking Projects undertaken by VFPA's Habitat Enhancement Program (HEP). This Annex describes the process implemented by HEP for developing Habitat Banking Projects and identifies key points during the process for input and involvement by Indigenous groups. HEP's consultation and engagement with Indigenous groups aims to identify and address project-related impacts, to design and implement appropriate mitigation measures, and to explore opportunities for Indigenous involvement such as participation in field studies and/or employment, training and contracting. Subject to the discretion and direction of applicable regulatory agencies, including VFPA, HEP also aims to undertake consultation with Indigenous groups in accordance with the requirements of regulatory processes that are applicable to the Habitat Banking Project (such as VFPA's Project and Environmental Review Process).

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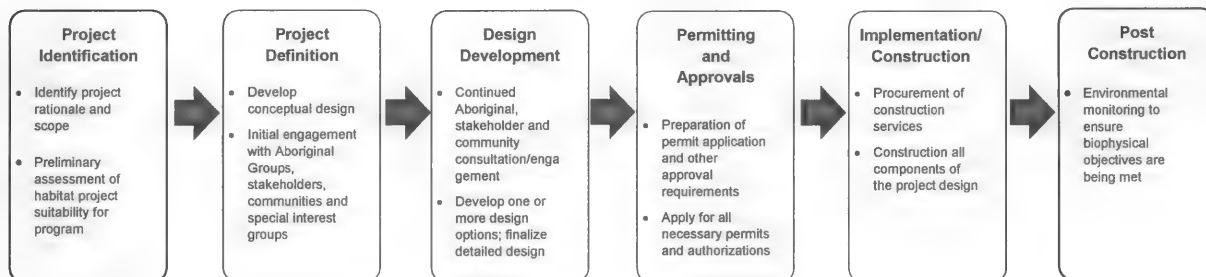
## Habitat Banking Project Development Process

The development of Habitat Banking Projects is achieved through six basic project management phases that are used to guide and control the project from start to finish.

Commencing with the identification of a potential project, the process provides for the structured development and advancement of all required components required for project delivery.

- Phase 1 (**Project Identification**) - The “idea” or the vision of what could be achieved.
- Phase 2 (**Project Definition**) - What are the project objectives? Constraints?
- Phase 3 (**Design Development**) - How will the project objectives be achieved?
- Phase 4 (**Permitting and Approvals**) - Obtaining formal permission to perform the work.
- Phase 5 (**Implementation/Construction**) - Construction of the habitat project.
- Phase 6 (**Post Construction**) - Ensuring long-term success of the habitat project.

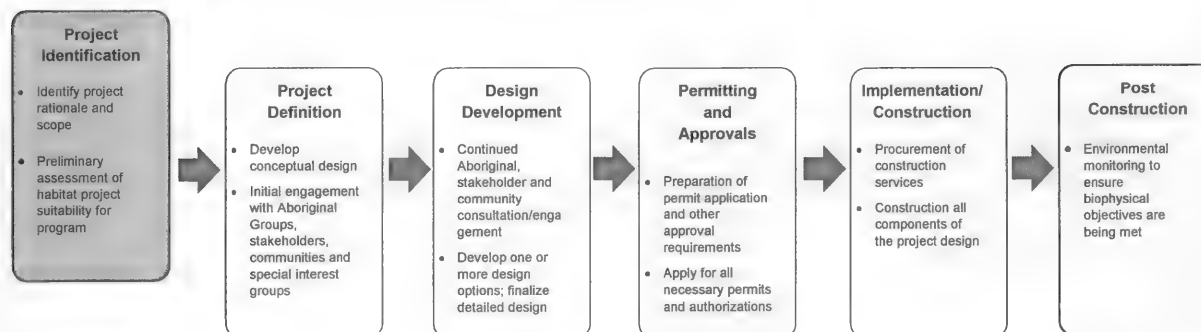
The illustration below depicts these six key project management phases and provides the key tasks associated with each.





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## Phase 1 - Habitat Banking Project Identification



The identification of potential Habitat Banking Projects is a critical component of the project delivery process. Considerations include habitat need, habitat productivity, feasibility, cost, land tenure, DFO confirmation and Indigenous matters.

### Indigenous Consultation and Engagement

- *HEP seeks input from Indigenous groups on identification of potential habitat enhancement sites*
- *HEP seeks input from Indigenous groups on Habitat Banking Projects identified by others*
- *Indigenous groups share available traditional knowledge, information and studies*

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## Phase 2 - Habitat Banking Project Definition



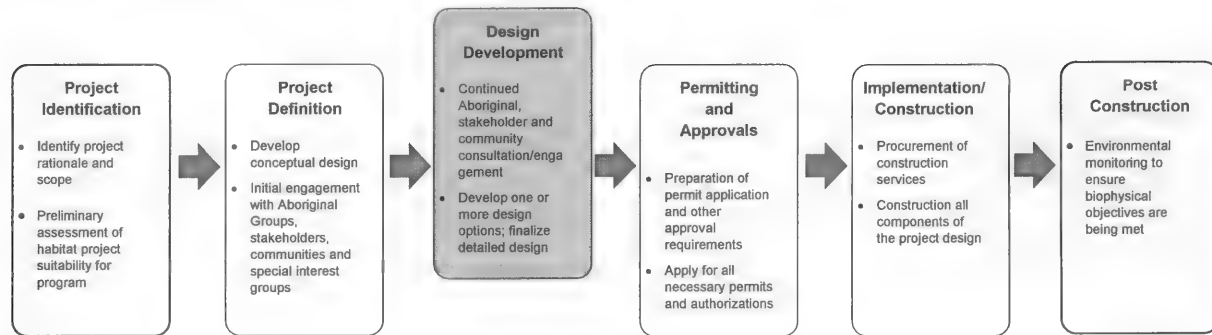
The development of conceptual designs is key in defining what a Habitat Banking Project could include. Using these concept designs, initial engagement and consultation on specific project features can commence.

### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on preferred engagement activities for project (e.g., Aboriginal Technical Design Committee)*
- *HEP consults Indigenous groups on project concept*
- *HEP identifies potential habitat values (i.e., credit estimates) that could be created and engages with interested Indigenous Groups*
- *Indigenous groups share Traditional Knowledge with HEP*
- *HEP identifies opportunity for involving Indigenous groups in field studies and assessments*
- *HEP commences planning for Indigenous involvement throughout project (e.g., contracting, employment and training opportunities)*

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## Phase 3 - Design Development



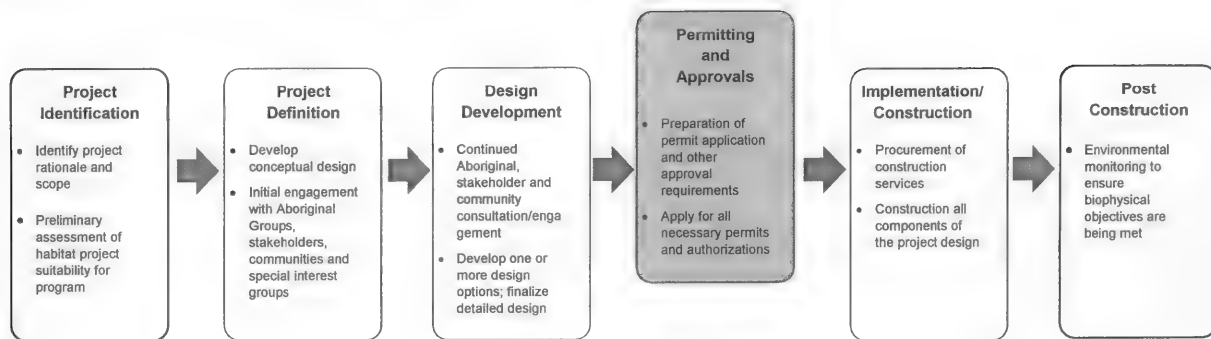
In the design phase, one or more designs are developed and evaluated. Through an iterative design process, a final design is selected and is refined to include all details necessary for construction.

### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on the design options*
- *HEP considers Indigenous feedback and refines design of project where appropriate (including selection of plant species)*
- *Where required, HEP undertakes further consultation with Indigenous groups on the design*
- *HEP finalizes the design*
- *HEP shares final design with Indigenous groups*
- *HEP confirms habitat values (i.e., credits) and consults with Indigenous groups*
- *HEP obtains DFO confirmation of appropriateness of habitat project for the Habitat Enhancement Program*
- *HEP plans for continued Indigenous involvement in subsequent phases*

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## Phase 4 - Permitting and Approvals



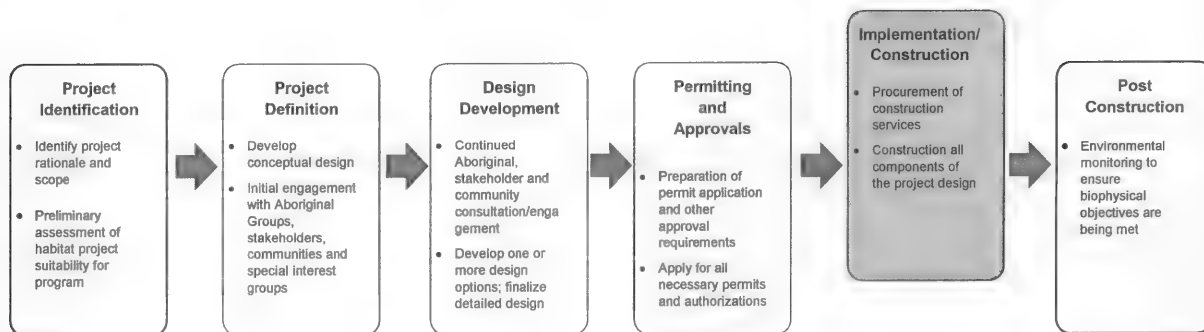
Permits and approvals that are required must be addressed on a project-by-project basis as regulatory requirements and land ownership can vary significantly.

### Indigenous Consultation and Engagement

- *HEP engages with Indigenous groups in relation to permits and approvals*
- *HEP develops a summary of permits and approvals required and shares with Indigenous groups*
- *HEP seeks Indigenous input and support on permit applications*
- *HEP notifies Indigenous groups on submission of permit applications*
- *Regulators and permitting authorities may undertake Indigenous consultation*
- *HEP plans for continued Indigenous involvement in subsequent phases*

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## Phase 5 - Implementation/Construction



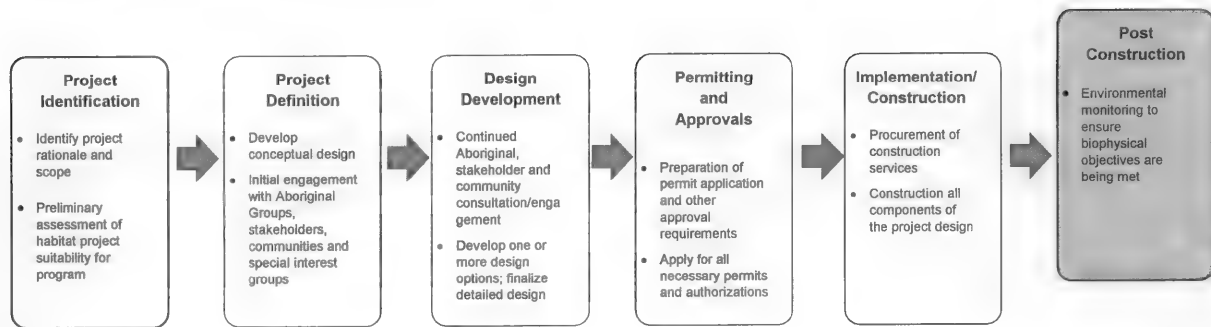
The Habitat Banking Project takes shape during the Implementation/Construction Phase.

### Indigenous Consultation and Engagement

- *HEP identifies approach to procurement and determines opportunities for Indigenous involvement/benefits*
- *HEP monitors conditions of approval/permits and any commitments to Indigenous groups*
- *HEP continues to keep Indigenous groups updated on progress of construction (e.g., sharing of construction monitoring reports)*
- *HEP plans for continued Indigenous involvement in Post Construction Phase*

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## Phase 6 - Post Construction



### Indigenous Consultation and Engagement

- HEP considers opportunities for enhanced integration of Indigenous input and identification of priorities into planning for post construction monitoring*
- HEP shares Post Construction Monitoring Plan with Indigenous groups*
- Potential contracting opportunities for Indigenous groups (e.g., maintenance, monitoring)*
- HEP explores opportunities for enhanced sharing of information (e.g., data collection such as potential DNA analysis, fish use data etc.)*
- HEP engages Indigenous groups regarding other types of reporting that the HEP can share that communicates project benefits and information of importance to Indigenous communities*

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are duplicates of  
sont des duplicatas des  
pages 1693 to / à 1707**

## Thorpe, Suzanne

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**From:** Nutton, Byron  
**Sent:** Tuesday, March 12, 2019 2:46 PM  
**To:** [REDACTED]  
**Cc:** Thorpe, Suzanne  
**Subject:** record of discussion  
**Attachments:** DRAFT\_2019-03-05\_DFO-TWN\_ROD\_Re\_VFPA\_Habitat\_Bank.docx

[REDACTED]

Thanks again for your time - Suzanne, Shona and I appreciated the opportunity to discuss some areas of common interest with you, and we look forward to continuing to work with TWN.

We took the liberty of trying to summarize our discussion in the attached document, and would appreciate if you could review it and let me know whether we missed or mis-characterized anything.

As captured in that summary I have already forwarded the current draft of the bank arrangement to Lindsey this morning.

Thanks again.

Regards,

*Byron Nutton*, RPBio

s.19(1)

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268



## **Fisheries and Oceans Canada (DFO) – Tsleil-Waututh Nation (TWN) Discussion on the Port of Vancouver Habitat Bank: Record of Discussion**

**Draft 2019-03-11**

**Date:** Tuesday, March 5, 2019

**Time:** 2:00 - 3:30 pm

**Location:** Tsleil-Waututh Nation, People of the Inlet Office, 3075 Takaya Drive, North Vancouver, BC

### **Participants:**

[REDACTED] TWN, [REDACTED]

[REDACTED], TWN, [REDACTED]

Byron Nutton, DFO Fisheries Protection Program, Team Lead

Suzanne Thorpe, DFO Fisheries Protection Program, Senior Biologist

Shona Smith, DFO Fisheries Protection Program, Client Liaison and Partnerships Coordinator

### **Agenda Items:**

1. Proposed renewal of Habitat Banking Arrangement between VFPA and DFO
2. Maplewood Flats proposed Habitat Bank project by VFPA

### **Discussion:**

#### **RE: Renewal of Habitat Banking Arrangement between VFPA and DFO**

- DFO explained context and intent to renew the Habitat Bank Arrangement with Vancouver Fraser Port Authority (VFPA) prior to March 31, 2019.
- TWN confirmed that since the last TWN-DFO-VFPA meeting (May 25, 2018) they have been apprised of the HBA through discussions they have held with VFPA and that an earlier copy of the HBA (draft August 2018) was shared by VFPA to TWN.
- DFO discussed the changes that have been made subsequent to the August draft (e.g., change in terminology from conservation projects to habitat banking projects, minor editorial changes).
- DFO confirmed that measures to address previous concerns raised by TWN have been incorporated into HBA, per below, with one exception.
  - ✓ Concerns surrounding the “sale” of credits are addressed under the proposed new HBA in that VFPA would not be able to sell/transfer credits, but VFPA could use their credits on behalf of a third party as described in Annex A.

- ✓ Early engagement on the development of habitat banking projects is addressed and included in Annex G: Indigenous Consultation and Engagement: Habitat Banking Project Development by HEP (VFPA's Habitat Enhancement Program).
- ✓ Consultation upon contemplation of a regulatory decision is addressed in Appendix F: Indigenous Consultation and Engagement: Use of Habitat Credits to Meet Offsetting Requirements of a *Fisheries Act* Authorization.
- Consultation if/when habitat banking credits are used as offsets for projects located outside of the local area – not addressed. However unlikely, a situation could arise where DFO's scope of consultation on impacts related to a future Authorization might not include TWN, although credits from habitat banking project in TWN traditional territory are used as offsetting.
- TWN confirmed that they are also negotiating a separate TWN-VFPA agreement related to habitat banking, and would ensure that it address the outstanding item related to consultation when habitat banking credits are used
- TWN would like to consider / review: 1) draft final HBA, and 2) Indigenous Engagement Summary report

**ACTION:** DFO to discuss sharing of documentation with VFPA and send to TWN. On March 12 Byron provided the current draft of the HBA to Lindsey, VFPA confirmed they will send Indigenous Engagement Summary report when it is finalized.

**ACTION:** TWN will prepare correspondence for DFO to indicate that they are not opposed to the VFPA-DFO Arrangement and can turn this around relatively quickly.

#### **RE: Maplewood Flats (MF)**

- DFO is expecting to receive package re: banking aspects for MF project – as completely separate from the offsetting package Authorized for VFPA's Centerm Expansion.
- DFO will consider the appropriateness of the offsetting and any tangible benefits to fish and fish habitat from the proposed bank @ MF
- TWN expressed that justification is needed (e.g., channel-work) and fulsome explanations to facilitate their understanding the benefits; they are expecting a "net environmental gain" – which may include benefits to crab fishery, coho/chum/pink, eelgrass community, etc.; some noted concerns with use of productivity models.

**TWN is expecting DFO to complete technical review for habitat banking success and project benefits.**

#### **RE: TWN programs**

- Services: archaeological assessments, environmental monitoring (mostly project related – construction/ site monitoring ... could consider long-term monitoring in future)
- Data collection: fish counts (Indian River), water quality information, forage fish surveys, eelgrass, count mapping, shore zone data collection; expanding to juvenile escapement/ netting & cumulative effects data collection) => issues with DATA HOUSING, but all Western Science data available for sharing.

- TWN is currently redrafting their stewardship policy. This policy guides TWN's decision making process with respect to all of the surface and subsurface air, land, water, cultural, and natural resources within the TWN consultation area.

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## Hwang, Jason

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**From:** Ko, Christina  
**Sent:** March-14-19 8:55 AM  
**To:** Nutton, Byron  
**Cc:** Hwang, Jason  
**Subject:** RE: OFFICER: VFPA Habitat Bank Arrangement

I just want to clarify who it is and I can fill out the rest. Thanks!

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** Thursday, March 14, 2019 8:49 AM  
**To:** Ko, Christina <Christina.Ko@dfo-mpo.gc.ca>  
**Cc:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Subject:** RE: OFFICER: VFPA Habitat Bank Arrangement

If it is supposed to be who wrote the Briefing Note, that would be me. I wasn't sure if that was what was needed, or if it was someone like you who is shepherding it through the process.

---

**From:** Ko, Christina <[Christina.Ko@dfo-mpo.gc.ca](mailto:Christina.Ko@dfo-mpo.gc.ca)>  
**Sent:** 2019-March-14 8:39 AM  
**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>; Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Subject:** OFFICER: VFPA Habitat Bank Arrangement

Good morning Jason and Byron

I'm filling this BN. Who should I put down as the Officer?  
Thanks!

Christina Ko

---

**From:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>  
**Sent:** Tuesday, March 12, 2019 2:41 PM  
**To:** Ko, Christina <[Christina.Ko@dfo-mpo.gc.ca](mailto:Christina.Ko@dfo-mpo.gc.ca)>  
**Subject:** FW: VFPA Habitat Bank Arrangement

thanks

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**From:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>  
**Sent:** March-12-19 2:40 PM  
**To:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>  
**Cc:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>; Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Subject:** FW: VFPA Habitat Bank Arrangement

Hi Brad. VFPA package attached in this email. Byron and Suzanne have done a great job keeping this on track and steering towards an outcome that works for everyone. Note the overview comments provided by Byron in the covering email below. If you have questions let us know. Jason

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** March-12-19 12:42 PM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
**Cc:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** VFPA Habitat Bank Arrangement

Jason, as discussed please see the attached updated draft Briefing Note, and “final drafts” of the Arrangement and the Engagement Summary.

The Briefing Note still requires file numbers on page 1, file numbers and additional information in the footer on pages 2-4, and the routing slip (page 5) needs to be completed – my understanding is that Christina Ko can do that stuff.

**Please note that in reference to our engagement with Tsleil-Waututh, in follow-up to our March 5<sup>th</sup> meeting I am expecting written confirmation that they have no outstanding concerns but have drafted the Briefing Note as final in anticipation of receiving that confirmation.**

The copy of the Arrangement is for review and information only – the copy to be signed is making its way through the VFPA sign-off process and will be delivered to Cheryl for final counter signature.

The Engagement Summary Report will be finalized and sent out to the participating Indigenous groups this week – the attached copy is the draft we circulated to participants for comment and to date we have not received any feedback that require changes.

With respect to the discussion points from our Feb 27 meeting with Brad:

- Term of Arrangement and 5-year review: I confirmed that the conditions related to the term and the review (and the entire arrangement overall) are consistent with the template provided in the guidance document. I reviewed the Briefing Note and confirmed that the use of the template is mentioned in the Summary box and again, this time with specific reference to the term and the 5-year review, in the Strategic Considerations section.
- Authorship of Engagement report: I confirmed with VFPA that cover page of final Engagement summary report (to be sent to Indigenous groups this week) will be the same as the final draft version attached, as opposed to being on VFPA letterhead, and I note that joint authorship is confirmed in Section 1: Overview.
- Squamish engagement: I am expecting a summary from VFPA on any additional attempts to engage with Squamish for our records, but it will not affect the outcome/adequacy of the engagement to date.

Let me know if you need anything further.

*Byron Nutton, RPBio*

A/Team Lead | Chef d'équipe Intérimaire  
Partnerships, Standards and Guidelines | Partenariats, Normes et lignes directrices  
Fisheries Protection Program | Programme de protection des pêches  
Fisheries and Oceans Canada | Pêches et Océans Canada  
Pacific Region | Région du Pacifique

250-618-4268

Subject: Call with VFPA RE MMRP Project Confirmation Document.txt  
Location: Conference Call

Start: Thu 3/14/2019 11:30 AM  
End: Thu 3/14/2019 12:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Olson, Charlotte

Categories: Important

Hi Byron/Suzanne

Please accept for an 11:30am call on Thursday March 14 - we will aim to provide you the MMRP Project Confirmation document (and supporting info) in advance of this call.

Call In Details:

\* +1-604-449-3026 (Vancouver)

\* Attendee access code: [REDACTED]

Thank you!  
Charlotte

s.16(2)(c)

## Hwang, Jason

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**From:** Hwang, Jason  
**Sent:** March-14-19 2:23 PM  
**To:** Nutton, Byron  
**Subject:** RE: VFPA Maplewood Flats proposed project

Who has the regulatory side of this (is it AI)? We should probably provide this note to them as well.

---

**From:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Sent:** March-14-19 11:14 AM  
**To:** Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>; Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>  
**Cc:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** VFPA Maplewood Flats proposed project  
**Importance:** High

Hey Jason and Brad,

Sorry for the late notice. Heads up that Suzanne and I have a call with VFPA at 11:30 to discuss their proposed Maplewood Flats habitat banking proposal, and there is a chance they will raise the issue with both or either of you, or perhaps Cheryl.

To be clear, this is not related to the negotiation of the renewed Arrangement – it is a specific banking project – but it has some sensitivities related to linkage with Centerm Expansion Project (CEP) – 17-HPAC-00374.

### Issue:

- [REDACTED]
- [REDACTED]
- A conference call is scheduled with VFPA later this morning (Thursday, March 14) for DFO to provide high-level first impressions of the proposal submitted on Monday, March 11
- [REDACTED]

### Background:

- Maplewood Flats is a large area of intertidal on the north shore of Burrard inlet, just east of Second Narrows
- Historically a portion of it was excavated out for gravel extraction, creating a basin that was subsequently used for log storage
- The basin is separated from Burrard Inlet by an intertidal “ridge” that allows connectivity at higher tidal levels, but a shallow channel in the southeast also maintain connectivity at broader tidal range
- The northeast portion of the basin is shallow, subtidal mud with relatively low habitat values and proposed enhancements in that area have been accepted as offsetting for CEP
- [REDACTED]

### File Summary:

- VFPA originally proposed the enhancements in the northeast basin to both offset CEP and provide banking credits (approx. 1:1), as well as the concept of the southwest channel (100% bank)
- After completing the regulatory review process, the enhancements in the northeast basin are now largely committed to CEP offsetting with only a fraction remaining for banking (approx. 10:1)
- During the regulatory review DFO noted that there appeared to be strong linkages between the CEP offsetting and the concept of the southwest channel, such that the former was dependent on the latter
- [REDACTED]
- [REDACTED]
- [REDACTED]
- VFPA repeatedly acknowledged DFO's concerns, and cited Indigenous engagement as the rationale for delays in submitting a proposal
- The habitat banking proposal was finally submitted on Monday, March 11 and as expected VFPA has expressed urgency related to timelines for review and acceptance

s.21(1)(a)

s.21(1)(b)



**From:** Nutton, Byron  
**Sent:** Thursday, March 14, 2019 2:46 PM  
**To:** Magnan, Alain  
**Cc:** Engelsjord, Michael; Richardson, Tessa  
**Subject:** FW: VFPA Maplewood Flats proposed project

**Importance:** High

Hey Al,

FYI due to linkage with Centerm. Mike and Tessa are aware of the overall issue.

Cheers,

Byron

**From:** Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)>  
**Sent:** March-14-19 11:14 AM  
**To:** Hwang, Jason <[Jason.Hwang@dfo-mpo.gc.ca](mailto:Jason.Hwang@dfo-mpo.gc.ca)>; Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>  
**Cc:** Thorpe, Suzanne <[Suzanne.Thorpe@dfo-mpo.gc.ca](mailto:Suzanne.Thorpe@dfo-mpo.gc.ca)>  
**Subject:** VFPA Maplewood Flats proposed project  
**Importance:** High

Hey Jason and Brad,

Sorry for the late notice. Heads up that Suzanne and I have a call with VFPA at 11:30 to discuss their proposed Maplewood Flats habitat banking proposal, and there is a chance they will raise the issue with both or either of you, or perhaps Cheryl.

To be clear, this is not related to the negotiation of the renewed Arrangement – it is a specific banking project – but it has some sensitivities related to linkage with Centerm Expansion Project (CEP) – 17-HPAC-00374.

**Issue:**

- [REDACTED]
- [REDACTED]
- A conference call is scheduled with VFPA later this morning (Thursday, March 14) for DFO to provide high-level first impressions of the proposal submitted on Monday, March 11
- [REDACTED]

**Background:**

- Maplewood Flats is a large area of intertidal on the north shore of Burrard inlet, just east of Second Narrows
- Historically a portion of it was excavated out for gravel extraction, creating a basin that was subsequently used for log storage

s.21(1)(a)

s.21(1)(b)

- The basin is separated from Burrard Inlet by an intertidal “ridge” that allows connectivity at higher tidal levels, but a shallow channel in the southeast also maintain connectivity at broader tidal range
- The northeast portion of the basin is shallow, subtidal mud with relatively low habitat values and proposed enhancements in that area have been accepted as offsetting for CEP
- [REDACTED]

#### File Summary:

- VFPA originally proposed the enhancements in the northeast basin to both offset CEP and provide banking credits (approx. 1:1), as well as the concept of the southwest channel (100% bank)
- After completing the regulatory review process, the enhancements in the northeast basin are now largely committed to CEP offsetting with only a fraction remaining for banking (approx. 10:1)
- During the regulatory review DFO noted that there appeared to be strong linkages between the CEP offsetting and the concept of the southwest channel, such that the former was dependent on the latter
- [REDACTED]
- [REDACTED]
- [REDACTED]
- VFPA repeatedly acknowledged DFO’s concerns, and cited Indigenous engagement as the rationale for delays in submitting a proposal
- The habitat banking proposal was finally submitted on Monday, March 11 and as expected VFPA has expressed urgency related to timelines for review and acceptance

s.21(1)(a)

s.21(1)(b)

## Pringle, Sarah

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**From:** Pringle, Sarah  
**Sent:** March-14-19 3:26 PM  
**To:** Webb, Cheryl  
**Cc:** Fanos, Brad  
**Subject:** VFPA Briefing Notes  
**Attachments:** MECTS-#4030712-v1-MEMO\_-\_Robert\_Bank\_Terminal\_2  
\_-\_Departmental\_Response\_to\_Indigenous\_Issues.DOC; MECTS-#4030719-v1-  
ATTACHMENT\_1\_\_Compilation\_of\_Responses.DOCX; MECTS-#4030787-v1-  
MEMO\_-\_Renewal\_of\_Proponent-  
Led\_Habitat\_Bank\_Arrangement\_with\_Vancouver\_Fraser\_Port\_Authority.DOCX; MECTS-#  
4030791-v1-ATTACHMENT\_1  
\_-\_Habitat\_Bank\_Arrangement\_Port\_of\_Vancouver\_Habitat\_Bank.PDF

Hi again,

Brad has asked me to pass along electronic copies of these 2 memos which have been submitted for your approval.

1. RBT2 Departmental Response to Indigenous Issues – will need to be approved tomorrow, March 15
2. Renewal of Proponent Led Habitat Bank Agreement with VFPA

Brad is also available to review the Summary of DFO Responses to Indigenous Issues (giant binder at my desk) with you tomorrow. The document is too large to attach here.

Sarah

No information has been removed or severed from this page

**Pages 2759 to / à 2794**  
**are duplicates**  
**sont des duplicatas**



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

Ecosystems Management Branch

Direction des écosystèmes

Regional Director

Directrice régionale

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2019-505-00013

EKME #: 4030712

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MEMORANDUM FOR THE REGIONAL DIRECTOR GENERAL

**ROBERTS BANK TERMINAL 2 – DEPARTMENTAL RESPONSE TO  
INDIGENOUS ISSUES  
(FOR DECISION)**

**SUMMARY**

Fisheries and Oceans Canada (DFO) is participating in the environmental assessment by Review Panel of the Vancouver Fraser Port Authority's (VFPA) Roberts Bank Terminal 2 Project (RBT2), a new container terminal proposed in Delta, British Columbia.

DFO is participating in consultation with Indigenous groups as part of a federal team led by the Canadian Environmental Assessment Agency (CEA Agency) as Crown Consultation Co-ordinator.

DFO has been asked to contribute responses to issues raised by Indigenous groups for inclusion in a whole of government submission to the Review Panel on Indigenous issues. DFO's responses (Attachment 1) have been requested by March 7, 2019.

It is recommended you approve DFO's responses (Attachment 1) by March 22, 2019 or sooner, if possible.

**BACKGROUND**

The VFPA proposes to construct and operate the RBT2, a new container terminal at Roberts Bank in the Fraser River Estuary in Delta, BC. The Project is undergoing an environmental assessment (EA) by review panel under the *Canadian Environmental Assessment Act, 2012*. DFO is participating in the EA as a Federal Authority with specialist or expert information or knowledge with respect to fish and fish habitat, including marine mammals and species at risk.

The Review Panel established to conduct an environmental assessment has determined that the information provided by the VFPA can now be discussed at the public hearings, which will begin on May 14, 2019. The Fisheries Protection Program (FPP) is preparing a written submission for Regional Director General decision by April 15, 2019.

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**Canada**

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The Indigenous Consultation Strategy for RBT2 includes providing the Review Panel with initial responses to issues raised by 23 Indigenous groups. The CEA Agency as the Crown Consultation Co-ordinator will develop a whole of government submission to the Review Panel on Indigenous issues identified to date.

Departments have been asked to provide initial responses, within their mandate and expertise, to the Indigenous issues raised to help inform the whole of government submission. Tracking tables with responses from departments will be appended to the CEA Agency submission. Due to the March 1, 2019 announcement from the panel that submissions are due by April 15, 2019, there is a short timeline for departments to provide information for the issues tracking tables. The CEA Agency has requested input by March 7, 2019; however, we were unable to meet this deadline and have advised them that we are making it a priority to complete as soon as possible.

Many of the issues raised by Indigenous groups are similar and general in nature. DFO has prepared responses to the issues raised from all 23 Indigenous groups using the CEA Agency tables provided in Attachment 1. A compilation of the DFO responses provided is summarized in Attachment 2.

DFO responses include information on:

- The VFPA's effects assessments and proposed mitigation measures for the project and marine shipping effects on fish, invertebrates, marine mammals, and their habitats;
- DFO analysis of the VFPA's information already provided to the Review Panel;
- DFO's views on mitigation measures; and
- Information on DFO policy, regulation and programs that relate to the concern (e.g. Fisheries Protection Provisions, Oceans Protection Plan, Whales Initiative).

### **STRATEGIC CONSIDERATIONS**

DFO's and other departments' responses will be shared with Indigenous groups and provided to the Review Panel and posted to the public registry. Initial responses to Indigenous group's concerns are intended to set the stage for further conversations with groups. As consultation is not complete, responses and analysis could change as discussions continue with Indigenous groups.

### **SCIENCE ADVICE**

Science advice has already been included in previous DFO submissions to the Review Panel and some of these submissions have been used to develop some of the responses to Indigenous issues.

### **INTERDEPARTMENTAL CONSULTATIONS**

This approach has been discussed with other federal departments and the CEA Agency and is based on the Indigenous Consultation Strategy that was presented to the Associate Deputy Ministers Major Ports Steering Committee in 2017.

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### INTRADEPARTMENTAL CONSULTATIONS

DFO Sectors (Science and Fisheries Management) have been engaged to provide input and support on the DFO responses to the various Review Panel requests provided to date.

DFO responses have been shared with National Headquarters and it is anticipated that the responses will be shared with the Deputy Minister for information.

### ADVICE AND RECOMMENDATIONS TO THE REGIONAL DIRECTOR GENERAL

It is recommended that the Regional Director General approve the DFO responses for inclusion in a whole of government submission to the Review Panel, attached as Attachment 1.

\_\_\_\_\_  
Cheryl Webb  
Regional Director, Ecosystems Management Branch

- ☐ I concur with the recommendations
- ☐ I do not concur with the recommendations

\_\_\_\_\_  
Rebecca Reid  
Regional Director General

Regional Director General's Comments:

#### Attachments (2):

1. Fisheries and Oceans Canada's Initial responses to Indigenous concerns for the Roberts Bank Terminal 2 Project (EKME #4030712)
2. Summary of DFO responses to Indigenous Issues (for information purposes) (EKME #4030712).

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Government of Canada  
Fisheries and Oceans

Gouvernement du Canada  
Pêches et Océans

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CATION

GCCMS #: 2019-505-00013

EKME #: 4030712

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To: Rebecca Reid Date:

Object: **ROBERTS BANK TERMINAL 2 PROJECT – RESPONSE TO**  
Objet: **INDIGENOUS CONCERNS**

From / De: Cheryl Webb, Regional Director - EMB

Via:

☐ Material for the Minister  
Documents pour le Ministre ☒ Your Signature  
Votre signature ☐ Information

Remarks: Brad Fanos, Director – Fish and Fish Habitat Protection Program  
Remarques:

Drafting Officer/  
Rédacteur: MICHAEL ENGELSJORD (604-666-2365)/Brad Fanos/ck





Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

Fish and Fish Habitat  
Protection Program

Programme de protection du  
poisson et de l'habitat du poisson

Director

Directeur

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2019-505-00014  
EKME #: 4030787

Commented [M31]: The GCCMS number will be generated after the docket is created

MEMORANDUM FOR THE REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT  
BRANCH

**RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT WITH  
VANCOUVER FRASER PORT AUTHORITY  
(FOR DECISION)**

**SUMMARY OF ADVICE TO REGIONAL DIRECTOR, ECOSYSTEMS  
MANAGEMENT BRANCH**

The purpose of this note is to seek approval of a renewed Habitat Bank Arrangement (the Arrangement) with Vancouver Fraser Port Authority (VFPA).

If approved, the Arrangement will replace the current habitat banking Working Agreement established between the DFO and VFPA in 2012 and scheduled to expire on March 31, 2019, and will be valid for a period of 15 years, with provision for review every five years.

The Arrangement establishes the terms and conditions for the renewed management of the Port of Vancouver Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016).

Engagement and consultation with Indigenous groups with asserted or traditional territories or treaty lands within the service area of the Arrangement was jointly undertaken by DFO and VFPA. While few, the key concerns, issues and input received have been considered and the consultation process has been concluded.

It is recommended that you approve and provide your signature to the renewed VFPA Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

## **BACKGROUND**

Over the past two years, since the release of *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016), DFO and VFPA have been negotiating an updated and renewed proponent-led Habitat Banking Arrangement to replace the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank* (2012).

The 2012 Agreement was set to expire in 2017, but was extended by letter to March 31, 2019 in order to allow for continued negotiation of a renewed Arrangement and for Indigenous engagement and consultation processes to be completed.

Several major considerations in the renewal of the Arrangement have been reconciled, including:

- Use of Credits by 3<sup>rd</sup> parties: The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.
- Credit valuation: The Interim Guide suggests that habitat credit valuation be mutually agreed upon based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction, with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.
- Land tenure: Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

.../3

## **STRATEGIC CONSIDERATIONS**

The existing Port of Vancouver Habitat Bank has been in place since September 2012 (approximately 6 ½ years) and is set to expire on March 31, 2019. The proposed new Arrangement establishes the terms and conditions for the renewed management of the Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016).

VFPA has maintained that the Habitat Bank is an important element of their overall business plan, and supports them in achieving their goal of ensuring that fish and fish habitat are considered in the development of the Asia-Pacific gateway.

Existing Fisheries Protection Program policies support habitat banking, and identify it as one mechanism that assists DFO in achieving its strategic outcome of *sustainable aquatic ecosystems*. In addition, the currently proposed amendments to the *Fisheries Act* include provisions that will formalize and further support habitat banking as an element of DFO's overall program delivery, should those amendments receive royal assent.

The proposed term of the Arrangement is 15 years, but consistent with the template provided in the guidance document it includes a provision for DFO to exercise an option to conduct a review every 5 years.

Significant effort has been invested by both DFO and VFPA over the past 2 ½ years conducting Indigenous engagement and negotiating the terms and conditions as proposed. Failure to execute the renewed Arrangement prior to the expiration of the current agreement on March 31<sup>st</sup> may jeopardize the continuation of the Port of Vancouver Habitat Bank.

## **INDIGENOUS CONSULTATIONS**

DFO and VFPA cooperatively developed and implemented an Indigenous engagement plan, and produced and distributed a report (*Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement*) documenting the engagement and providing responses to concerns brought forward.

Based on input received during the engagement process the following changes were incorporated into the Arrangement:

- DFO and VFPA agreed to change the standardized terminology from “conservation project” to “habitat banking project” in the final version of the Arrangement to better describe the purpose of the projects and to address Indigenous concerns related to the potential for “conservation” to be considered ahead of Indigenous interests.
- VFPA updated their framework for conducting consultation associated with future proponent-led habitat banking projects.

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- 4 -

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The Tsleil-Waututh Nation (TWN) declined to participate in the joint DFO-VFPA engagement process; however, both VFPA and DFO have engaged with them separately. Concerns raised by TWN early on have been addressed through the drafting of terms and conditions in the Arrangement and no additional concerns were raised at the most recent meeting on March 5, 2019.

#### **EXTERNAL CONSULTATIONS**

No external consultations were conducted beyond the engagement with Indigenous groups documented above.

#### **ADVICE AND RECOMMENDATIONS TO REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT BRANCH**

It is recommended that you approve and provide your signature to the renewed Port of Vancouver Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

\_\_\_\_\_  
Brad Fanos  
Director  
Fish and Fish Habitat Protection Program

- ☐ I concur with the recommendations
- ☐ I do not concur with the recommendations

\_\_\_\_\_  
Cheryl Webb  
Regional Director  
Ecosystem Management Branch

#### **Attachments (2):**

- 1) Habitat Bank Arrangement: Port of Vancouver Habitat Bank (EKME #4030791)
- 2) Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement (EKME #4030794)

**Commented [MJ2]:** List all attachments and their EKME numbers. Ensure attachments are attached and label attachments with a tab corresponding to the number in this section.



Fisheries and Oceans Canada  
Correspondence Routing Slip

Fiche d'acheminement de correspondance  
Pêches et Océans Canada

UNCLASSIFIED  
GCCMS # : 2019-505-00014  
EKME # : 4030787

To: Cheryl Webb  
Pour:

Date:

**Commented [MJ3]:** Do not input date. This is to be dated once all parties have approved the note.

Object: **RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT**  
Objet: **WITH VANCOUVER FRASER PORT AUTHORITY**

From / De: Brad Fanos, Director, Fish and Fish Habitat Protection Program

**Commented [D4]:** For SEP and Oceans, include Brigid's information in this section.

☐

Material for the Minister  
Documents pour le Ministre

☒

Your Signature  
Votre signature

☐

Information

Remarks: This briefing note was developed in consultation with the following  
Remarques: regions/sectors:

**Commented [MJ5]:** Any SMEs- Additional Approvers who provided input or assisted in the development of this note.

Please ensure each individual listed in this section has initialled beside their name prior to bringing the docket to the RD.

Drafting Officer /  
Rédacteur:

BYRON NUTTON (250-756-7221) / Brad Fanos / ck

**Commented [MJ6]:** Please fill this section in the same format provided. The Director should be Cheryl for FPP SARA dockets and Brigid for Oceans SEP dockets.

## **Compilation of DFO Responses to Indigenous Issues/Concerns**

This document is a compilation of all DFO responses in the 23 nation-specific issues tracking tables (attachment 1 to the memorandum). It is provided to allow for easier review of responses provided by DFO. Some of the responses below appear in more than one of the nation-specific tables, where different First Nations identified issues under the same topics.

### **Fish and Fish Habitat**

Potential effects on fish, marine invertebrates and their habitats have been assessed and conceptual mitigation plans have been identified. If the project proceeds to construction more detailed mitigation plans would be developed by the proponent. Where mitigation measures cannot completely avoid impacts on fish and fish habitat the proponent would require authorization under subsection 35(2)(b) of the *Fisheries Act*. Before making a decision of whether to issue an authorization DFO considers the contribution of the relevant fish to ongoing productivity of fisheries, fisheries management objectives, and measures to avoid, mitigate or offset harm. DFO will consult with potentially affected First Nations prior to making a decision on authorization.

#### **Effectiveness of mitigation measures (Fish and Fish habitat)**

The fish habitat offsetting plan would need to be developed consistent with DFO's *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting* (2013) in order to counterbalance unavoidable serious harm to fish resulting from the project, with the goal of maintaining or improving the productivity of fisheries.

Requirements for offset construction, effectiveness monitoring, contingency measures, and reporting are included as conditions of *Fisheries Act* authorizations. For the *Fisheries Act*, monitoring must be designed to confirm that the offsetting measures have been effective in counterbalancing the serious harm to fish and may identify the need for contingency measures should deficiencies be found. The offsetting plan should include clearly articulated measures of success that are linked to the objective of the offsets and that provide benchmarks for measuring progress, as well as a schedule that reflects the timeline, start and end dates for implementing the offsetting measures.

#### **Enforcement**

Potential effects on fish and fish habitats have been assessed and conceptual mitigation plans have been identified. If the project proceeds to construction more detailed mitigation plans would be developed by the proponent. Where mitigation measures cannot completely avoid impacts of fish and fish habitat the proponent would require authorization under subsection 35(2)(b) of the *Fisheries Act*. Before making a decision of whether to issue an authorization DFO considers the contribution of the relevant fish to ongoing productivity of fisheries, fisheries management objectives, and measures to avoid, mitigate or offset harm. DFO will consult with potentially affected First Nations prior to making a decision on authorization.

The Fisheries Act contains provisions for the enforcement of conditions of authorization.

#### **Reef Fish**

The Proponent predicts negligible effects to reef fish (Lingcod, Copper Rockfish, Quillback Rockfish) productivity following mitigation and offsetting. The Proponent suggests that potential losses from injury and mortality and changes in the acoustic environment can be minimized with standard mitigations such as timing windows, a Marine Species Salvage Plan and Underwater Noise Management Plan. The proposed subtidal rock reef offsetting concept would provide suitable habitat for reef fish species.

### **Noise Effects on Fish**

Potential effects on fish and fish habitats have been assessed and conceptual mitigation plans have been identified. If the project proceeds to construction more detailed mitigation plans would be developed by the proponent. Where mitigation measures cannot completely avoid impacts to fish and fish habitat the proponent would require authorization under subsection 35(2)(b) of the *Fisheries Act*. Before making a decision of whether to issue an authorization DFO considers the contribution of the relevant fish to ongoing productivity of fisheries, fisheries management objectives, and measures to avoid, mitigate or offset harm. DFO will consult with potentially affected First Nations prior to making a decision on authorization.

The proponent identifies a potential residual effect on Pacific herring from Project related underwater noise in section 13 of the Environmental Impact Statement. Further assessment of the effects of Project-related underwater noise on salmon is provided in response to IR5-26 and IR5-27 and evaluated by DFO in CEAR #1289.

The Proponent has used the limited information available to come up with plausible noise threshold criteria and assessed the effects of underwater noise on marine fish based on modelling of sound propagation, using one of the best models available, during cases of construction and marine terminal operation; including different piling operations, dredging, berthing and transiting of container ships and tugs. The results of this work suggest minor decreases in productivity resulting from direct mortality and disturbance from underwater noise during Project construction only. However, there are large uncertainties with regards to these conclusions, due to lack of available data at the present time.

The Proponent has proposed conceptual Underwater Noise Management Plan that will include use of underwater noise reduction and dampening methods and technologies during project construction. Underwater noise mitigation during construction is generally successful at preventing injury or death of fish if implemented as intended.

The proponent has also committed to compliance monitoring for underwater noise as part of the Construction Compliance Monitoring Plan.

Potential behavioural effects to Pacific herring are possible from marine shipping activities; but only predicted to occur within 20m of a vessel. No measures are proposed by the proponent to mitigate behavioural effects.

### **Effects of Light on Fish**

The Proponent assesses the potential negative effects of lighting and shading on juvenile Chinook and Chum salmon and all life stages of herring and Eulachon in the local assessment area for the proposed project in response to the review panel's IR5-25. DFO evaluated this response in CEAR #1289.

The Proponent has proposed a Light Management Plan that will describe measures to reduce excess lighting and sky glow during construction and will include orienting lights downward and away from residential and marine areas; using shielding to minimize light trespass; controlling light levels and limiting light use to areas where activities are occurring; where possible, using fixtures that emit light at wavelengths shown to minimise disorienting effects to birds; and ensuring dredge lighting system shields light from spilling outside the basic working footprint of the dredge.

The proposed plan appears to consider all feasible ways to minimize light disturbance to fish during nighttime construction activities.

Lighting from shipping activities was not identified by the Proponent as an effects mechanism in the assessment of effects on Marine Fish in Section 8.1 of the Marine Shipping Supplemental Report.

### **Representative Species**

The Proponent's response to AIR-12.04.15-09 describes the selection process for VCs, sub-components, and representative species and rationale for selection. Discussion of how sockeye, sturgeon, and eulachon were captured in the assessment (i.e., by proxy), is provided.

Further discussion of eulachon, white sturgeon, Interior Fraser coho and Cultus Lake sockeye is presented in the Proponent's response to IR5-15.

### **Effects on migratory patterns**

The Marine Fish effects assessment (EIS Section 13) includes an assessment of the potential effect on the migration behaviour of juvenile salmon from terminal placement and causeway widening. The proponent predicts a minor decrease in juvenile salmon productivity due to Project effects on the migration behaviour of juvenile salmon pre-mitigation.

The potential effects of terminal placement on the migratory behaviour is also discussed in the proponent's responses to IR5-18 and IR5-22.

DFO evaluation of the effects assessment for juvenile Chinook and Chum salmon is provided in CEAR #1423. The Proponent's conclusion of minor negative impacts of the Project on the productivity of juvenile Chinook and chum salmon is reasonable based on the data presented.

### **Habitat of Marine Invertebrates**

The Proponent assessed the potential effects of the Project on marine invertebrates and conceptual mitigation measures have been identified. Identified measures include the use of timing windows to protect sensitive life stages of Dungeness crab (soft shell and gravid females); A Marine Species Salvage Plan including crab salvages and orange sea pen transplant; standard mitigation practices to minimise the potential for marine invertebrates to be affected via sediment and water quality pathways including implementation of a Construction Environmental Management Plan; and, proposed offsetting concepts including eelgrass, tidal marsh, mudflat, sandy gravel beach and subtidal rock reefs which are all expected to provide suitable habitat for marine invertebrate species.

If the project proceeds to construction more detailed mitigation plans would be developed by the proponent. Where mitigation measures cannot completely avoid impacts of fish and fish habitat the



proponent would require authorization under subsection 35(2)(b) of the *Fisheries Act*. Before making a decision of whether to issue an authorization DFO considers the contribution of the relevant fish to ongoing productivity of fisheries, fisheries management objectives, and measures to avoid, mitigate or offset harm. DFO will consult with potentially affected First Nations prior to making a decision on authorization.

### **Dredging**

The Proponent has committed to developing a Dredging and Sediment Discharge Plan. This plan would describe the management and timing of dredging activities and discharge of sediment laden water, including mitigation and timing restrictions. Dredging activities are planned for April 1 to October 14 in order to avoid impacts to sensitive life stage of Dungeness crab.

### **Crab Salvage**

Salvage of crab is proposed by the Proponent as a mitigation measure to reduce the potential for direct mortality of crab during Project construction. Salvages are planned for all Project activities that have potential to cause direct mortality to legal-sized male and gravid female Dungeness crabs. The Proponent does not anticipate salvage to be effective for recently settled or early instar juvenile Dungeness crabs.

DFO anticipates crab salvage be more effective for legal sized Dungeness crabs, and less effective for gravid female crabs that may not enter traps; soft shell crabs that could be injured with handling; and sub-legal Dungeness crabs that are too small to be entrained in traps.

The VFPA has heard a suggestion from Aboriginal groups to set traps outside the Project area to draw crabs away instead of trapping within the Project area and relocating them and is currently exploring this option.

While salvage of crab would not mitigate all potential mortality, it is a feasible measure to reduce crab mortality during Project construction.

### **Crab harvest**

The proposed project will result in the loss of access to at least 117ha of area due to terminal placement.

The proponent proposes to further consult with Indigenous crab harvesters concerning proposed expansion of the area closed to commercial and recreational crab fishing. The proponent indicates its intent is reduce displacement effect of the terminal by ensuring Indigenous crab harvesting can continue in the proposed navigational closure area.

The proponent's response to IR7-34 discusses mitigation measures currently undergoing consultation and evaluation for potential effects on commercial crab harvesters.

### **Orange Sea Pen**

Potential effects of the Project on Orange Sea Pen are identified in Section 12 of the EIS. Due to the project footprint, the Proponent concludes a moderate reduction in orange sea pen productivity. In response to IR5-07, the proponent provides an assessment of potential ecological effects on other components of the environment from a decrease in orange sea pen population due to the Project.

Orange Sea Pen transplant is included in the proponent's Marine Species Salvage Plan. The proponent is conducting a pilot project to examine the feasibility of Orange Sea Pen transplant as a mitigation strategy. The Orange Sea Pen Transplant Pilot and Monitoring Program report indicated stable densities and evidence of recruitment at two of the three transplant sites, indicating the ecological viability of transplantation as a potential mitigation measure.

The proponent notes that it would not be logistically feasible to transplant the entire sea pen aggregation out of the RBT2 footprint. The VFPA has proposed sea pen transplantation verification as part of the RBT2 Follow-up Program to verify mitigation effectiveness.

This mitigation strategy is a novel approach to mitigate direct mortality of orange sea pens from construction of the terminal. As such, there is uncertainty as to its effectiveness; however, given the positive results of this pilot study, orange sea pen transplant appears to be a feasible mitigation strategy to *partially* mitigate loss of sea pens due to the proposed terminal placement.

### **Shellfish in the Inter-causeway Area**

The proponent modelled hydrodynamic and morphodynamic effects of the Project on the of the Local Assessment Area. No project related effects to geomorphology were anticipated in the inter-causeway area.

DFO and NRCan conducted a technical review of the model and comments can be found in CEAR #893 and #1289.

No bivalve harvesting currently occurs within the local or regional assessment areas of marine invertebrates, due to both Sanitary and Biotxin Shellfish Closures.

### **Shellfish Sanitary Closures**

Eating contaminated bivalve shellfish can be harmful or even fatal. Clams, oysters, scallops and mussels can be contaminated by toxins, bacteria or chemicals in surrounding waters.

Areas that exceed the allowable limits of any harmful substance are closed to shellfish harvesting.

The Government of Canada tests the waters where shellfish are harvested for bacteria. If bacterial levels in the water sample exceed safe guidelines, the area is recommended for closure.

In addition to collecting water samples, the federal government also evaluates the potential sources of water contamination close to these shellfish harvesting areas. When there is a distinct possibility of contamination, we evaluate the threat closely. We provide additional recommendations to either fix the issue and/or close the area to shellfish harvesting. Closures are common around urban areas where there is the possibility of contamination from marinas and wastewater systems. For more information please visit: <http://dfo-mpo.gc.ca/shellfish-mollusques/closures-fermetures-eng.htm>

### **Intermediate Transfer Pit**

The Proponent has determined that Intermediate Transfer Pit (ITP) is no longer necessary and is no longer proposed as a Project component. Vibro-replacement in the marine environment in the dredge basin and underneath buildings are no longer planned.

## **Causeway Breach**

The Proponent provided information on its study 'Potential Effects of Opening the Causeway' in its response to IR1-13.

## **Tsawwassen Fishing Area and Bivalve Fishing area**

Effects within the Tsawwassen Fishing Area have been assessed. The local, regional and cumulative effects assessment areas for marine fish and invertebrates encompass much of the Tsawwassen Fishing Area. Effects on the Tsawwassen Bivalve Fishing Area are not anticipated because this is outside of the area predicted to be affected by the Project.

## **Access to Tsawwassen Fishing Area**

Construction of the Project would result in loss of access to part (at least 117ha) of the Tsawwassen Fishing Area identified in the Tsawwassen First Nation Final Agreement.

## **Marine Vegetation**

The proponent assessed the potential effects of the Project on Marine Vegetation in section 11 of the Environmental Impact Statement and conceptual mitigation plans have been identified. If the project proceeds to construction more detailed mitigation plans would be developed by the proponent for impacts to fish and fish habitat, which would include eelgrass, kelp, and intertidal marsh. Where mitigation measures cannot completely avoid impacts of fish and fish habitat the proponent would require authorization under subsection 35(2)(b) of the *Fisheries Act*. Before making a decision of whether to issue an authorization DFO considers the contribution of the relevant fish to ongoing productivity of fisheries, fisheries management objectives, and measures to avoid, mitigate or offset harm. DFO will consult with potentially affected First Nations prior to making a decision on authorization.

## **Ecosystem effects**

As described in Section 10.0 of the EIS, the proponent adopted an ecosystem based approach to evaluate both direct and indirect effects as a result of the Project footprint. Future ecosystem productivity is assessed through an ecosystem model which incorporates predicted changes to the environment (salinity, depth, bottom current, wave height, and hard or soft substrate), and food web interactions over time and space. The results of this model was used as a line of evidence in the effects assessments for vegetation, invertebrates, birds, and fish.

## **Management Plans**

For Project-construction, management plans and conceptual mitigation measures have been identified. If the project proceeds to construction more detailed management plans and mitigation would be developed by the proponent.

## **Impact of Shipping on salmon**

Potential effects of vessel traffic associated with the project on marine fish and fish habitat are assessed in Section 8.1 of the Marine Shipping Supplemental Report. The potential effects mechanisms are identified as vessel wake generated waves and underwater noise; however, the proponent has predicted these effects to be negligible. As marine shipping associated with the Project is not expected to result in a measureable change in marine fish or fish habitat, no mitigation measures or follow-up program is proposed.

### **Impact of Shipping on fish (variation)**

The proponent assessed the potential effects of marine shipping on marine fish and fish habitat. It notes that due to depth ranges of benthic and demersal fish, such as rockfish, sharks, and flatfish, interaction with RBT2 associated marine vessels would be extremely limited. Pacific Salmon, Pacific herring and shellfish were chosen for the assessment. Potential interactions and potential effects of marine shipping associated with the Project on fish and fish habitat include vessel wake and underwater noise. The assessment concludes negligible effects to fish and fish habitat because wake is not anticipated to effect shoreline habitats and underwater noise from transiting ships sound levels would not exceed injury thresholds for fish and behavioural effects are only predicted for Pacific herring within 20m of the noise source.

As marine shipping associated with the Project is not expected to result in any measureable change in marine fish or fish habitat no mitigation measures or follow-up program is proposed.

### **Impact of Shipping on fish (variation)**

As marine shipping associated with the Project is not expected to result in any measureable change in marine fish or fish habitat, no mitigation measures or follow-up program are proposed by the proponent.

For marine mammals, no follow-up program is proposed. However, the proponent commits to working with stakeholders, Aboriginal groups, regulators, and the ECHO program to monitor distribution and abundance of marine mammals within the LAA to identify, prevent, and adaptively manage potential effects of underwater noise and vessel strikes on marine mammals, if the occur.

### **Impact of Shipping on Shellfish**

Potential effects of vessel traffic associated with the project on marine fish and marine invertebrates and their habitats are assessed in Section 8.1 of the Marine Shipping Supplemental Report. No potential interactions with shellfish are identified. As marine shipping associated with the Project is not expected to result in a measureable change in marine fish or fish habitat, no mitigation measures or follow-up program is proposed.

### **Marine Mammal Effects Assessments**

An assessment of potential effects of the project and associated marine shipping traffic on marine mammals is provided in Section 14 of the Environmental Impact Statement and Section 8.2 of the Marine Shipping Supplemental Report.

Potential adverse effects to marine mammals from vessel strikes following the implementation of mitigation measures are described in the proponents response to IR5-51. Proposed mitigation are marine mammal awareness pamphlets that describe actions that could be implemented by mariners to reduce potential effects of vessel strikes and a VFPA Port Information Guide that includes information for commercial and recreational mariners, such as marine mammal species at risk and their critical habitat,

information on the Port's ECHO program and the BC Cetacean Sightings Network and how to report vessel strikes on the network.

As outlined by the Proponent, the information material provided to mariners for educational purposes will assist in the detection and identification of marine mammals and their respective habitats and raises overall awareness of their presence and how to mitigate ship collisions between baleen whales and commercial vessels. The provided information material contains general information on how to mitigate ship strike risk, e.g. by slowing down when whales are spotted or when travelling at night.

DFO has provided a suggestion to add specific guidance for pilots, vessel operators and crew on how to spot Humpback Whales that are feeding in the area and how to keep track of those individuals to the existing information material. This would not interfere with the lack of jurisdictional oversight by the VFPA as is demonstrated by a recently started very promising pilot project by Ocean Wise in collaboration with the VFPA's ECHO program to send whale alerts via a cell phone App (WRAS) to vessel operators and marine pilots to allow better mitigation of collision risk across the larger Project area. (CEAR #1289)

Potential effects of the Project and marine shipping related underwater noise on Southern Resident Killer Whale are identified.

To mitigate potential effects of underwater noise on marine mammals during project construction the proponent identifies conceptual Underwater Noise Management Plan and Marine Mammal Observation Plan.

The Underwater Noise Management Plan would include use of underwater noise reduction and dampening methods and technologies during project construction,

The Marine Mammal Observation Plan would include monitoring by marine mammal observers of potential injury and disturbance areas through the use of underwater hydrophones to reduce exposure of marine mammals to levels of underwater noise from construction activities that could potentially result in hearing injury or adverse behavioural effects. The proponent states that if a SARA listed marine mammal is detected within the buffer distance, the construction activity will suspend until the animal is not seen within the buffer distance for 30 minutes. The proponent has also committed to coordinate with existing whale sighting networks to receive advance warning of SRKW approaching the construction area to facilitate mitigation.

The proponent provides information on its ECHO Program in its response to IR4-10 and discusses measures to mitigate effects of underwater noise on marine mammals during the proposed Project operation in its response to IR5-50.

The Proponent states that there are currently no technically feasible mitigation measures under the care and control of the VFPA that can be implemented during Project operations and no specific mitigation measures are proposed to reduce underwater noise from marine shipping associated with the Project. The technical and economic feasibility of potential mitigation measures to reduce underwater noise from shipping in the region is currently being explored as part of the VFPA-led ECHO Program and by the Government of Canada as part of its Oceans Protection Plan. For vessel traffic within VFPA jurisdiction, the VFPA-led Enhancing Cetacean Habitat and Observation (ECHO) Program is engaging with tug operators to explore and understand the contribution of underwater noise from a range of tugs under different speeds and operation conditions. The intention is to help inform what future vessel noise reduction options might be available to tugs operating within the port and within the wider region.

The VFPA, through its ECHO program has been proactive in its approach to developing measures to reduce the underwater noise from vessels using its facilities. However, VFPA also identifies that, there are jurisdictional limitations to the level of influence the Proponent can have on reduction of underwater noise. Probably one of the most effective means of reducing noise radiated from merchant vessels is in changing the design and construction of new ships. However, this is, as stated, clearly outside the Proponent's jurisdiction. Nevertheless, the VFPA has come up with financial incentives for ships using their facilities to work on reducing the noise impacts of these vessels. The 2017 Haro Strait slowdown trial, instigated by the ECHO program, indicated that reducing vessel speeds is an effective way of reducing the underwater noise generated at the vessel source, as well as reducing total underwater noise in nearby habitats, which may in turn benefit the behaviour and foraging success of SRKW (Haro Strait slowdown trial, final report).

### **Cumulative impacts on SRKW**

Under the Oceans Protection Program Fisheries and Oceans Canada and Transport Canada are leading initiatives to preserve and restore marine ecosystems vulnerable to increased marine shipping and development (Pillar 2 of OPP).

To achieve this, the plan will reduce the impact of day-to-day vessel traffic on marine ecosystems, including on marine mammals, particularly the Southern Resident Killer Whale, St. Lawrence Estuary Beluga and the North Atlantic Right Whale, by using sound science and knowledge of coastal waters provided by Indigenous and coastal communities.

Within this pillar, Transport Canada and Fisheries and Oceans Canada have been taking action to support the survival and recovery of the Southern Resident Killer Whale.

### **Protecting marine mammals**

To protect our endangered whales, including the Southern Resident Killer Whale, Fisheries and Oceans Canada researchers are working to better understand the cumulative effects of shipping, including collisions and noise pollution. Researchers are establishing current ambient underwater noise levels in these whales' habitat and determining whale distribution and habitat use over the annual cycle. This research will help to inform measures aimed at reducing noise levels. Fisheries and Oceans Canada researchers are also developing and testing various acoustic and imaging technologies able to detect the presence of whales in near real-time which could help alert mariners of the presence of whales in a particular area, reducing the risk of collisions.

To better respond to marine mammal incidents, such as collisions, entanglements and strandings, Fisheries and Oceans Canada Fishery Officers are developing a national approach and capacity, in line with international best practices, to respond to marine mammal incidents. This new capacity is bringing with it the added benefit of enhancing compliance, enforcement and surveillance of marine protected areas.

### **Restoring coastal ecosystems**

Investments are being made in the preservation and restoration of vulnerable coastal marine ecosystems. Funding is supporting the establishment of coastal zone plans and identify restoration priorities on all three coasts. Habitat restoration projects are engaging Indigenous communities, resource users and local groups and communities.

The Oceans Protection Plan has several initiatives aimed at the preservation and restoration of Canada's marine ecosystems and habitats.

## Whales Initiative

The Government of Canada has committed to protecting Southern Resident Killer Whales, an iconic species which is vital to the local marine ecosystem and holds cultural significance for Indigenous Peoples and coastal communities in British Columbia.

Government has advanced a comprehensive strategy with measurable actions to protect and support the recovery of the Southern Resident Killer Whales. This strategy has advanced in three stages:

1. In late 2016, the initial launch of the \$1.5 billion Oceans Protection Plan included, among other things, funding for research and engagement to inform the development of a strategy on how to address underwater noise from vessels affecting Southern Resident Killer Whales. The launch of the OPP also initiated the Government of Canada conducting science-based whale reviews on the effectiveness of recovery measures to that date for three whales including Southern Resident Killer Whales, and subsequent public engagement. This resulted in the development of the “What We Heard Reports”, the Southern Resident Killer Whale Symposium and ultimately the Whales Initiative funding describe below. It provided a basis for the way forward on what is needed to promote the recovery of the species.

2. Based on the work taken under the OPP, in June 2018, the Government of Canada launched the \$167 million Whales Initiative. Regarding Southern Resident Killer Whales, one of the main objectives of this Initiative was the introduction of actions to help mitigate the three main threats these whales face: lack of prey, physical and acoustic disturbance, and contaminants. It responds to the determination made in May 2018 by the competent ministers for the species under the *Species at Risk Act* that the Southern Resident Killer Whale is facing an imminent threat to its survival and recovery.

3. In late October 2018, the Government launched significant additional measures to enable a more comprehensive and aggressive approach to mitigating the main threats facing the Southern Resident Killer Whales, and better promote the survival and recovery of this endangered population.

A suite of measures has been launched that is tailored to addressing the unique combinations of interrelated threats to the Southern Resident Killer Whale. Many are designed to be adaptive, taking into account analysis of results achieved. Specifically, the actions are directed at the main threats to the Southern Resident Killer Whales by:

- o Improving prey availability;
- o Reducing physical and acoustic disturbance from vessels;
- o Enhancing monitoring under the water and in the air for whale presence;
- o Encouraging compliance and strengthening enforcement;
- o Building partnerships for additional action, including active collaboration with US partners to align measures in shared waters, and ongoing engagement with the marine industry; and
- o Investing in scientific research.

## Availability of prey

An assessment of potential effects of the project and associated marine shipping traffic on marine mammals is provided in Section 14 of the Environmental Impact Statement and Section 8.2 of the Marine Shipping Supplemental Report. The assessments include the potential for changes in availability of prey.

### **Killer Whale diet**

During the summer and fall, the principal prey of Southern Residents is Chinook and Chum Salmon (*Oncorhynchus tshawytscha* and *O. keta*); less is known of their diet in the winter and spring. To ensure that Resident Killer Whales have an adequate and accessible food supply to allow recovery, a strategy identified in the Recovery Strategy for Northern and Southern Resident Killer Whales is to determine the seasonal and annual diet and energetic requirements of Resident Killer Whales.

### **Contaminant levels in Killer Whales**

There have been only a handful of studies that have measured contaminant levels in Killer Whales, and for obvious reasons no controlled experiments have been done to assess how these contaminants may affect them directly. However, the effects of contaminants on other species such as pinnipeds are better understood, and in many cases can be generalized to Killer Whales, particularly because the physiological processes of mammals are similar across different species.

### **Marine Mammal baseline data**

Fisheries and Oceans Canada (DFO) is undertaking a large-scale survey in the Northeast Pacific Ocean to survey marine mammals. The survey, led by the Cetacean Research Program, ran from July 3 to September 6, 2018, and will provide information on abundance of marine mammals. Surveys of this magnitude have been conducted before by DFO in Atlantic Canada and the Central Arctic, but not in Canadian Pacific waters.

The 10-week survey looked at the summer distribution of marine megafauna, or large marine animals. The objective is to obtain data for as many cetacean species (e.g. whales, dolphins, and porpoises) as possible, as well as other marine species (seals and sea lions, sharks, sea turtles). Important research identified for these species include the assessment of population status, abundance trends and seasonal distribution. The emphasis is on estimating abundance of marine mammal populations, which requires systematic surveys of all waters off British Columbia. However, this survey also provides a chance to refine our knowledge of the critical habitat of species listed under Canada's Species at Risk Act (SARA), and for observation of species not listed under SARA, on which there has been less research effort in the past.

### **Updated behavioural responses analysis**



The Proponent has revised the behavioral response analysis for western Juan de Fuca Strait to include the additional year of data from SRKW use around Swiftsure Bank. The total number of behavioural responses within the Extended Region has been reassessed, resulting in an increase of 79 low-severity and 22 moderate-severity responses. The Proponent concluded that the additional data do not alter their initial assessment.

Table 8.2-7 of the EIS (now referenced as Table IR5-47-2) has been updated to reflect the increase in behavioral responses and hours of behavioural disturbance in the local assessment area. The Proponent states that the criteria ratings would not change as a result of the inclusion of this information, as the calculated increase in the low- and moderate-severity behavioural responses in the LAA is not discernable.

DFO provided a technical analysis of the proponent's response in CEAR#1289 which indicates that the scientific guidance presented in Southall et al (2007) has significant limitations, and in many cases, a context-specific analysis may be more appropriate. Given that the SRKW population is endangered, and harm to an individual has a higher likelihood of population-level effects, the value of Southall's behavioural response categories may be even more limited as they do not account for the context of a population that is already endangered.

A context-specific analysis of acoustic impacts on this population (Ellison *et al*, 2012) would be expected to provide a more accurate and appropriate representation of the potential impacts.

### **Humpback whale and Stellar Sea Lion**

The proponents response to IR5-53 discusses criteria ratings related to potential cumulative effects to humpback whales and Stellar sea lion

DFO evaluated to the proponent's response to IR-53 in CEAR #1229. Overall, the Proponent has provided further rationale to support the criteria ratings for the residual Project cumulative effect for Humpback Whales and Steller Sea Lions. The examination of these rationale as well as information from additional supporting references, shows that the conclusion from the DFO Canadian Science Advisory Secretariat (CEAR Document #919) is still valid: "The conclusion in Section 14.9, that effects on Humpback Whales and Steller Sea Lions are expected to be short-term and reversible with no long-term population consequences, and the assigned high confidence level in this conclusion are reasonable for the RAA and LAA areas."

### **Impact of water and sediment quality on marine mammals**

Water and sediment quality is not identified as an indicator for determining a change to marine mammals in the Marine Shipping Supplemental Report. The proponent assessed the potential for marine shipping to affect water quality in section 7.3 of the Marine Shipping Supplemental Report and concludes that vessel transit activities associated with the Project are not expected to adversely affect marine water quality.

### **Marine Mammal Regulations (whale watching)**

The rules for whale watching and approaching marine mammals, which are now in effect, provide a minimum approach distance of 100 metres for most whales, dolphins and porpoises to legally protect these animals from human disturbances.

A minimum distance approach of 200m for all killer whale populations in B.C. and the Pacific Ocean is now mandatory. The 200m approach distance for killer whales on the Pacific coast is supported by published studies and evidence that this distance will reduce noise and vessel interference with whale foraging activities.

### **Fate and Behaviour of Oil**

A multi-partner research initiative to support collaboration among leading national and international experts on oil spill research was initiated in November 2016 through the national Oceans Protection Plan. Through this, DFO is collaborating with:

- Oil spill experts in government, industry and academia;
- Indigenous and coastal communities;
- Regulatory agencies; and
- Response organizations.

The Oceans protection Plan provides new funding for research capacity at the Centre for Offshore Oil, Gas and Energy Research (COOGER) that conducts research on marine oil spills, including:

- Monitoring the fate and behavior of petroleum products in the marine environment; and
- Testing various techniques to mitigate the impacts of oil spills on coastal ecosystems.

### **Effects of Oil Spill on Fishing**

In the event of a spill, DFO may take Fisheries management actions - e.g. if necessary, shut down fisheries to protect human health.

### **Cumulative effects on the health of the Salish Sea**

Investments are being made in the preservation and restoration of vulnerable coastal marine ecosystems. Funding is supporting the establishment of coastal zone plans and identify restoration priorities on all three coasts. Habitat restoration projects are engaging Indigenous communities, resource users and local groups and communities. The Oceans Protection Plan has several initiatives aimed at the preservation and restoration of Canada's marine ecosystems and habitats.

### **Monitoring of Shipping effects**

The proponent has not proposed a follow-up monitoring program for project-related marine shipping.

### **How did green crab arrive?**

European Green Crab arrived in B.C. likely through larval transport between 1998 and 1999. In B.C., this species has been found along the entire West and North Coast of Vancouver Island from Sooke Basin to Port Hardy with potentially ephemeral, populations east of Sooke Basin in Beecher bay and north of Port Hardy along the Central Coast. This species has not been observed in the Strait of Georgia.

### **Float planes**

**Use of float planes is not an activity associated with the Roberts Bank Terminal 2 Project.**

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Thorpe, Suzanne

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**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Monday, March 25, 2019 2:04 PM  
**To:** Nutton, Byron  
**Cc:** Thorpe, Suzanne; Ruffo, Gord; Scoble, Jemma  
**Subject:** RE: DFO VFPA Indigenous Engagement - Final Summary Report for DFO - March 25  
**Attachments:** 2019-03-25 DFO-VFPA Arrangement-IG Consultation Summary RPT-Rev1-FINAL.pdf

Good afternoon Byron, as discussed last week, and for you to provide to Cheryl Webb – please find attached the final bound “*Summary of Indigenous Engagement on VFPA and DFO’s Habitat Bank Arrangement*” report for DFO’s records.

This final report has been provided to DFO as requested this week, to facilitate the execution of our Habitat Bank Arrangement.

Note that should VFPA receive any late/last comments from any Indigenous groups, we will be sure to let you know – as those comments would be considered. As communicated, as of right now, no changes were made to the attached report, as no comments have been received to-date since this report was circulated the week of Feb 4/19.

I trust this meets your requirements, please don’t hesitate to follow up if needed.

Thank you,

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

**From:** Olson, Charlotte  
**Sent:** Friday, March 22, 2019 3:46 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Cc:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** Re: DFO VFPA Indigenous Engagement - Squamish Nation Log and Habitat Bank Arrangement Update

Hi Byron

No problem, per our discussion just now, yes your understanding is correct. We wanted to give all groups that participated in the information sessions as much time as possible to provide input on the draft report, and still, no substantive comments have been received to date.

As discussed, we will ensure DFO is provided with a final copy of the report next week, so you can provide it in your package for Cheryl Webb.

Thanks for the call, [REDACTED] and we’ll chat next week.

Regards,  
Charlotte

s.19(1)

On Mar 22, 2019, at 2:45 PM, Nutton, Byron <[Byron.Nutton@dfo-mpo.gc.ca](mailto:Byron.Nutton@dfo-mpo.gc.ca)> wrote:

Hi Charlotte,

Thank you for the information regarding efforts to engage with Squamish Nation regarding renewal of the Habitat Bank.

With respect to the Summary report, I am curious about the delay in providing the final. I am of the understanding that there were no substantive comments requiring consideration of amendments to the draft that was circulated, so I assume that it is simply a matter of sending that version as a final as opposed to any additional changes. Can you confirm that this is the case and let me know the rationale for the timing?

Thanks,

Byron

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** 2019–March-22 9:25 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Cc:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Ruffo, Gord <Gord.Ruffo@portvancouver.com>; Scoble, Jemma <Jemma.Scoble@portvancouver.com>  
**Subject:** DFO VFPA Indigenous Engagement - Squamish Nation Log and Habitat Bank Arrangement Update  
**Importance:** High

Good morning Byron

As requested by DFO, please find attached an engagement communications log for Squamish Nation, specific to the engagement on the VFPA-DFO Habitat Bank Arrangement.

Please note that this log only includes communications between Squamish Nation and VFPA HEP related to DFO/VFPA engagement on a new habitat bank Arrangement from August 2018 to March 2019. HEP regularly engages with Squamish on other aspects of the HEP program (not included in this log).

Also, as discussed with you recently, HEP has committed to providing the final *“Summary of Indigenous Engagement on VFPA and DFO’s Habitat Bank Arrangement”* report to all Indigenous Groups (including Squamish Nation) by the end of March 2019. As you know, the draft report was provided to Indigenous Groups who participated in the 3 Information Sessions the week of Feb 4/19, to allow time for their feedback, prior to distribution of the final report to all groups. DFO will be provided record of final report distribution to all Indigenous Groups, and all comments received (at any time) will be considered.

Please don’t hesitate to call or follow up with any questions on the attached log.

**Update on status of the Arrangement:** As of today (March 22) the Arrangement is with our President and CEO, Robin Sylvester for final review & signature. I anticipate the signed Arrangement to be couriered to DFO (Cheryl Webb) early next week. I will advise you once it has been couriered.

Regards,

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development

<image001.png>

**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

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**HABITAT BANK ARRANGEMENT:  
PORT OF VANCOUVER HABITAT BANK  
SUMMARY OF INDIGENOUS ENGAGEMENT ON  
VFPA AND DFO'S HABITAT BANK  
ARRANGEMENT**

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### Table of Contents

1.	Overview and Purpose .....	3
2.	Indigenous Groups within VFPA's Operational Area .....	3
3.	Engagement Activities .....	5
	<i>3.1 Information Packages.....</i>	<i>6</i>
	<i>3.2 Information Sessions .....</i>	<i>6</i>
	<i>3.3 One-on-One meetings .....</i>	<i>7</i>
4.	Attendance Records for Information Sessions .....	7
5.	Presentations & Other Materials .....	9
6.	Concerns, Issues and Input Received.....	9
7.	Responses and Next Steps .....	12
8.	Reporting .....	14
<b>Appendices.....</b>		<b>15</b>



## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 1. Overview and Purpose

Vancouver Fraser Port Authority (VFPA) currently operates a habitat bank that was created through a formal Working Agreement (2012) with Fisheries and Oceans Canada (DFO). This agreement will expire in March 31, 2019. Prior to entering into a new long-term Habitat Bank Arrangement, DFO and VFPA have undertaken engagement to ensure:

- Indigenous groups are provided the opportunity to provide input into the Indigenous engagement and consultation process for habitat bank projects that fall under the VFPA Habitat Enhancement Program (HEP); and,
- Indigenous groups are provided information regarding VFPA and DFOs intent to enter into a renewed long-term Habitat Bank Arrangement.

Both VFPA and DFO recognize the importance of undertaking meaningful engagement and consultation, based on considerations for good governance, enhanced relations and advancing reconciliation, as well as improving project outcomes. Through engagement VFPA and DFO endeavor to foster opportunities for collaboration, and seek support and input from Indigenous groups to advance the VFPA-DFO Habitat Bank Arrangement.

This report summarizes the recent engagement undertaken by VFPA and DFO to support the above-listed requirements. Content presented in this report was jointly prepared by VFPA and DFO.

### 2. Indigenous Groups within VFPA's Operational Area

VFPA and DFO recognize the history and contemporary interests of Indigenous peoples and work to establish and maintain productive relationships through Indigenous engagement and regular communication, as well as by ensuring that the protection of fish and fish habitat are considered in the development of the Asia-Pacific Gateway.

Vancouver Fraser Port Authority operates within the asserted traditional territories of 37 Coast Salish Indigenous groups and in proximity to the treaty settlement lands of the Tsawwassen First Nation (refer to Figure 1 on the next page).



## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

- Lyackson First Nation
- Sto:lo Nation
  - Aitchelitz First Nation
  - Leq'a:mel First Nation
  - Matsqui First Nation
  - Popkum First Nation
  - Shxwha:y Village First Nation
  - Skawahlook First Nation
- Sto:lo Tribal Council
  - Chawathil First Nation
  - Cheam First Nation
  - Kwantlen First Nation
  - Kwaw-kwaw-Apilt First Nation
  - Scowlitz First Nation
  - Seabird Island First Nation
  - Shxw'ow'hamel First Nation
  - Skowkale First Nation
  - Soowahlie First Nation
  - Squiala First Nation
  - Sumas First Nation
  - Tzeachten First Nation
  - Yakweakwioose First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation

### 3. Engagement Activities

The following activities were undertaken:

- An letter was sent to Indigenous groups inviting them to attend the VFPA-DFO information sessions
- Information packages were shared as attachments to the invitation letters



## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

September 11, 2018	VFPA Office
<u>Information Session No.2</u>	Brentwood Bay, BC
October 16, 2018	Brentwood Bay Resort
<u>Information Session No.3</u>	Chilliwack, BC
November 29, 2018	People of the River Referrals Office

### 3.3 One-on-One meetings

One-on-one meetings or other types of engagement activities (e.g., presentations to elders and/or leadership, community meetings) were offered. Only one request was received for this type of engagement which was received from Tsleil-Waututh Nation. TWN advised VFPA that they would not participate in the VFPA/DFO engagement sessions regarding the HEP and new Habitat Bank Arrangement as they are already engaged in ongoing discussions with VFPA and DFO regarding administration of VFPA's habitat bank.

No other requests for meetings, additional information or feedback have been received to date.

## 4. Attendance Records for Information Sessions

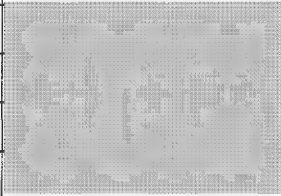
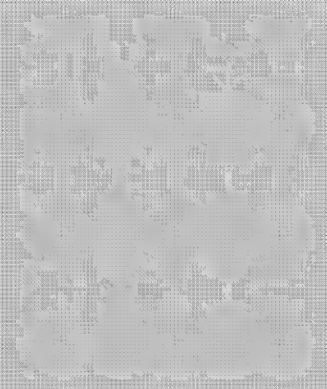
Information Session No. 1 – Vancouver (September 11, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsawwassen First Nation	Victoria Williams
Musqueam First Nation	
Kwikwetlem First Nation	
Semiahmoo First Nation	
Katzie First Nation	

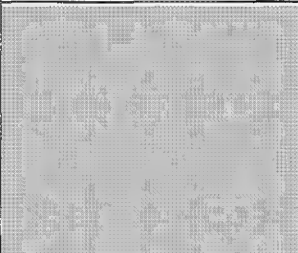
Information Session No. 2 – Brentwood Bay, BC (October 16, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo Sinead Deery

VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

DFO	Byron Nutton Suzanne Thorpe Shona Smith
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tsartlip First Nation	
Tseycum First Nation	Chief Tanya Jimmy
Tseycum First Nation	
Tsawout First Nation	
Pauquachin First Nation	
Penelakut Tribe	
Cowichan Tribes	
Lake Cowichan First Nation	
Lyackson First Nation	
Lyackson First Nation	

Information Session No. 3 – Chilliwack, BC (November 29, 2018)

ORGANIZATION	NAME OF INDIVIDUAL
VFPA	Charlotte Olson Jemma Scoble Gord Ruffo
DFO	Suzanne Thorpe Shona Smith
People of the River Referrals Office	
Lower Fraser Fisheries Alliance	

s.19(1)

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 5. Presentations & Other Materials

Presentations and other materials shared during the VFPA/DFO engagement included the following:

- Package of information and accompanying letter (August 2018)
  - Overview of VFPA's Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Projects Delivered for Inclusion in VFPA's Habitat Bank
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
  - Fisheries and Oceans Canada – Overview of Proponent-led Habitat Banking
- VFPA's Information Session Presentation
  - Objectives of the session
  - Overview of the Habitat Enhancement Program
  - Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
  - Project Example: New Brighton Park Shoreline Habitat Restoration Project
- DFO's Information Session Presentation
  - Requirements for a *Fisheries Act* Authorization
  - Proponent-led Habitat Banking
  - Habitat Banking Arrangements
- DFO document: Frequently Asked Questions on Proponent-led Habitat Banking

### 6. Concerns, Issues and Input Received

Several key topics were raised during this engagement process. Input that VFPA and DFO received included the following:

#### **VFPA-DFO Habitat Bank Arrangement:**

- Discomfort with language used by DFO in relation to consultation, specifically the term "conservation" – there is concern that Aboriginal rights can be set aside in favour of conservation.
- Importance of ensuring that constructed project sites are protected into the future.
- Concern that DFO is justifying infringement on Aboriginal rights through banking; earlier and better consultation is required.

#### **Habitat Banking (specifically):**

- Concern that because First Nations were not consulted with banking that happened in the 1990s that their voices will not be heard on future banking projects.
- Concern that habitat banking projects are tied to a specific location and as an offset project, that First Nations must accept the impact.

## VFPA AND DFO'S HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### **VFPA/HEP Engagement Processes:**

- General comment that the HEP consultation is understood and has been effective.
- General support for projects built to date and consultation process undertaken by VFPA.
- Desire for Indigenous involvement in all aspects and phases of HEP projects: provision of input to project ID, collection of data, design, construction, monitoring and specifically, in goal-setting, decision making and evaluation.
- Interest in providing input into what is monitored (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Sharing of information: collection data, monitoring data, fish use data, construction monitoring reports. Also sharing of important work happening by many organizations (Indigenous, NGO, governments, etc.). There is value in making information available.
- Consideration should be given to other types of reporting to ensure that project benefits are communicated appropriately. Suggestion to work with Indigenous groups to identify the type of information that will be useful to share with participating communities.
- Concern that some habitat enhancement projects may not advance due to municipal or other stakeholder interests even when First Nations are supportive.

### **DFO Indigenous Consultation and Regulatory Processes:**

- General consultation concerns: adequacy of consultation at all levels of First Nations governance (for all aspects of habitat banking, including the policy itself). Suggestion that DFO consult at a higher level at First Nations' organizations.
- Concerns that DFO consultation is completed on a project by project basis – one project at a time when Authorization is sought. Importance of First Nations being informed of projects that do not get an Authorization due to impacts.
- Concern that the Crown is swayed to grant Authorizations if habitat is already banked.
- Concern with DFOs approach to Douglas Treaty Nations and recognition of rights.
- Guiding principles for offsetting should include that offsetting be done to also support First Nations cultural values.
- There is a need for DFO to address broader concerns related to several Aboriginal fisheries.
- General perspective that habitat is not “created” but only restored; something must be displaced to create new habitat.
- There is perception that DFO approves all authorizations.
- Comment that there is a need to use Western science and Traditional Knowledge in the monitoring and evaluation of projects.
- First Nations wish to be informed about all projects, even those that do not get an Authorization due to impacts sufficient to cause serious harm.



## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

- Comment that First Nations do not feel properly consulted by DFO.

### **General, Scientific, Technical and Cultural:**

- Request for projects to be built on the South Arm of the Fraser River and Vancouver Island.
- Interest in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consideration of climate change, sea level rise and flood management in project planning.
- General interest in shellfish restoration & other food-harvest value species.
- Cultural considerations are important: intertwine legacy and cultural history into projects.
- Cultural loss of marine aquatic species (e.g., clam beds).
- Development of educational resources, including First Nations specific educational aspects and opportunities (e.g., important species, cultural history).
- Need for balance: infrastructure development and healthy environment.
- Request that DNA analysis be undertaken on stocks of fish for any foreshore habitat that VFPA is enhancing.

### **General state of the environment:**

- Concern regarding the inability to compensate for historic impacts / damage / destruction of environment – lack of industry accountability for historic damages / destruction of habitat.
- Need for a balance of infrastructure development and the environment.
- Concern regarding the impacts of dyking on the lower Fraser River.
- Concern regarding the impacts of fish farms.
- Importance needs to be placed on protecting native species.
- Access to and health of marine aquatic species (e.g., clam beds) for First Nations.

### **Other:**

- *Fisheries Act* review comments not adequately addressed from an Indigenous perspective; comment that the review processes was too short.
- Importance of long-term foreshore management planning and VFPA support of this work and other initiatives.
- Concern that habitat enhancement projects (e.g., Steveston Tidal Marsh Project) may not advance due to municipal or other stakeholder interests even when FN are supportive.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### 7. Responses and Next Steps

#### **VFPA-DFO Habitat Bank Arrangement and Habitat Banking Specifically:**

In response to concern brought forward regarding the term "*conservation project*" in the context of habitat banking, DFO and VFPA have adopted the use of the term "*habitat banking projects*" in the Port of Vancouver Habitat Bank Arrangement, and DFO will consider the same for any future Habitat Banking Arrangements that might be proposed in the Pacific Region. In addition, this concern has been communicated to DFO staff in Ottawa that work on the development of habitat banking guidance.

Both DFO and VFPA recognize the importance of ensuring that habitat banking project sites are protected into the future. In this regard, VFPA will monitor and manage projects to meet their objectives until such a time as the credits associated with those projects are removed from the bank, and in the longer-term those sites will be subject to the protection provisions of the *Fisheries Act*.

Comments and concerns with respect to early engagement and consultation related to habitat banking are addressed by VFPA and DFO, respectively in the two sections below.

#### **VFPA/HEP Engagement Processes:**

VFPA will review the Habitat Enhancement Program consultation process in light of the input received to consider opportunities to improve its effectiveness. VFPA will:

- Consider opportunities for Indigenous involvement in all aspects and phases of HEP projects, including the provision of input to: project identification, collection of data, design, construction, monitoring and specifically, in goal-setting, decision-making and evaluation.
- Consider opportunities and a process for enhanced integration of Indigenous input and identification of priorities into planning for monitoring (i.e., testing taste and quality of fish for consumption rather than just fish presence and health).
- Explore opportunities for enhanced sharing of information, including, but not limited to, collection data, monitoring data, fish use data, construction monitoring reports, and work happening by other organizations (e.g., Indigenous, NGO, governments, etc.).
- Further discussion with Indigenous groups regarding other types of reporting that the Habitat Enhancement Program can share that communicates project benefits and information of importance to Indigenous communities.

#### **DFO Indigenous Consultation and Regulatory Processes:**

The Government of Canada is committed to advancing reconciliation with Indigenous peoples through a renewed, nation-to-nation, Inuit-Crown and government-to-government relationship based on the recognition of rights, respect, cooperation and partnership. Fisheries and Oceans Canada is now also in the early stages of reviewing its laws and policies and consulting with Indigenous communities to identify future changes to advance reconciliation with Indigenous peoples.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

As outlined in DFO's "Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking", the establishment of a proponent-led Habitat Bank Arrangement does not commit DFO to the authorization or permitting of any future work, undertaking or activity that requires authorization under the *Fisheries Act* or *Species at Risk Act*. All projects are reviewed on their own merit and a decision on whether to authorize or permit is made independent of the existence of a proponent-led Habitat Bank Arrangement.

DFO is required to consult with Indigenous groups prior to making decisions under the federal *Fisheries Act*. Therefore, when a proponent proposes to use banked habitat credits as part of an Application for Authorization, DFO must undertake consultation with any potentially affected Indigenous groups in relation to the proposed development project, including the use of habitat bank credits to meet offsetting requirements.

Feedback regarding the need for the guiding principles of habitat banking to support First Nations cultural values and to specifically include Traditional Knowledge in all aspects of the planning, development, construction, monitoring and evaluation of projects will be considered by DFO for any Habitat Banking Arrangements that might be proposed in the Pacific Region. As well, DFO notes the desire for habitat banking projects to address broader concerns related to Aboriginal fisheries. This feedback has been communicated to DFO staff in Ottawa who work on development of habitat banking guidance and DFO looks forward to continued discussion on how to incorporate these concerns into policy and projects.

### **General, Scientific, Technical and Cultural and General state of the Environment:**

DFO and VFPA appreciate the input provided at the engagement sessions and note that many of the items raised are already considered by VFPA and DFO in the context of habitat banking as well as other aspects of their respective organizations. These items and concerns will continue to be considered moving forward.

In particular, with respect to habitat banking VFPA will identify opportunities to integrate the input received, as well as the priorities and ideas raised during the engagement process. VFPA will:

- Consider producing cultural/educational materials for habitat banking projects and the Habitat Enhancement Program.
- Work with Indigenous groups to identify potential projects on the South Arm of the Fraser River and Vancouver Island area.
- Undertake further discussion with Indigenous groups interested in VFPA considering projects that aren't just physical land masses (e.g., improved dyking system design with benefits to fish).
- Consider opportunities (i.e., workshops and initiatives) related to shellfish restoration & other food-harvest value species.
- Continue to work with Indigenous groups on opportunities to intertwine legacy and cultural history into projects.
- Consider opportunities for DNA analysis to be undertaken on fish stocks in foreshore habitats that VFPA is enhancing.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### Other:

Comments regarding DFO's consultation process related to the review of the *Fisheries Act* have been forwarded to DFO staff conducting that consultation.

Both DFO and VFPA recognize the importance of long-term foreshore management planning and moving forward on restoration and enhancement projects, and look forward to further engagement with Indigenous groups and other levels of governments on related initiatives.

### 8. Reporting

DFO and VFPA will report out to Aboriginal groups on any specific actions or changes from the review of the consultation process resulting from the engagement process and input shared and ensure Indigenous groups are provided information regarding the status of the DFO-VFPA habitat banking agreement. DFO and VFPA will:

- Share this report, along with copies of the habitat banking-related information presented during the engagement process.
- Notify Indigenous groups when a new DFO-VFPA Habitat Bank Arrangement is in place.
- Respond to any future questions or requests for information related to the DFO-VFPA Habitat Bank Arrangement.

The Habitat Enhancement Program provides for ongoing engagement and consultation which allows for continued opportunities to address any concern or issues. HEP will provide opportunities to Indigenous groups to identify and where possible, advance priority projects in collaboration with VFPA.

## VFPA AND DFO's HABITAT BANK ARRANGEMENT | Summary of Indigenous Engagement

### Appendices

**Appendix 01 – Information Packages Provided to Indigenous Groups**

**Appendix 02 – VFPA Presentation Material**

**Appendix 03 – DFO Presentation Material**

**Appendix 04 – DFO Frequently Asked Questions**

**Appendix 05 – Meeting Record from September 11, 2018 Information Session (Vancouver)**

**Appendix 06 – Meeting Record from October 16, 2018 Information Session (Vancouver Island)**

**Appendix 07 – Meeting Record from November 29, 2018 Information Session (Fraser Valley)**

## **APPENDIX 01- INFORMATION PACKAGES PROVIDED TO INDIGENOUS GROUPS**



Vancouver Fraser Port Authority  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4  
portvancouver.com

Via e-mail

August 14, 2018

Chief Bill Williams  
Squamish Nation  
320 Seymour Blvd  
North Vancouver, BC V7J 2J3

Dear Chief Williams:

**Re: Habitat Enhancement Program Information Package**

The Vancouver Fraser Port Authority (VFPA) currently has a formal agreement with Fisheries and Oceans Canada (DFO) for habitat banking that enables VFPA to create fish habitat ahead of infrastructure development. This agreement was established in 2012 and will expire in early 2019. It is the intent of VFPA and DFO to enter into a new agreement for habitat banking.

Prior to entering into this new agreement, VFPA and DFO would like to share information with Aboriginal groups on the consultation process used for the delivery of future habitat projects that are proposed for VFPA's habitat bank. This is also an opportunity for VFPA to obtain Squamish Nation's input on this process and to address any questions related to the habitat bank. To facilitate this engagement, VFPA is providing the attached information that describes the following:

- VFPA's Habitat Enhancement Program, which manages the habitat bank
- VFPA's Aboriginal consultation and engagement process used for the delivery of proposed habitat projects that would be included in the habitat bank
- A recent habitat project example (New Brighton Park Shoreline Habitat Restoration Project) that was constructed for inclusion in VFPA's habitat bank
- DFO's overview of proponent-led habitat banking

To further support the sharing of information and feedback, we are proposing to hold scheduled information sessions where the material provided in these information packages would be presented and representatives from VFPA and DFO would be available to answer specific questions.

These information sessions are tentatively scheduled for:

- September 11<sup>th</sup> (Lower Mainland)
- October 11<sup>th</sup> (Vancouver Island)

Invitations to these information sessions will be forwarded in the near future and will provide venue locations and time of sessions.

Squamish Nation  
August 14, 2018  
Page 2 of 2

Input from Aboriginal groups into the consultation process used for the delivery of proposed habitat projects for VFPA's habitat bank is important to VFPA and, as such, VFPA will be seeking feedback up to November 2, 2018.

All comments and information received through the information sessions or through other correspondence will be considered, documented and responded to as part of this process. A summary report of this input will also be prepared by VFPA and submitted to DFO. This report will also be shared with Aboriginal groups.

If you have any questions, comments or concerns regarding the information package provided herein, please contact Jemma Scoble at (778) 822-7240 or [jemma.scoble@portvancouver.com](mailto:jemma.scoble@portvancouver.com).

Yours truly,

VANCOUVER FRASER PORT AUTHORITY



Charlotte Olson, P.Geo., PMP  
Manager, Infrastructure Habitat Development  
Vancouver Fraser Port Authority's Habitat Enhancement Program

Attached (4): Attachment 1: Overview of VFPA's Habitat Enhancement Program  
Attachment 2: Overview of Aboriginal Consultation and Engagement  
on Habitat Projects Delivered for Inclusion in VFPA's  
Habitat Bank  
Attachment 3: Project Example: New Brighton Park Shoreline  
Habitat Restoration Project  
Attachment 4: DFO's Overview of Proponent-led Habitat Banking

Electronic cc:

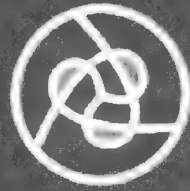
Byron Nutton, Team Lead, Standards and Guidelines, Fisheries Protection Program, DFO  
Suzanne Thorpe, Senior Fisheries Protection Biologist, Fisheries Protection Program, DFO



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pages 665 to / à 680**

**Pages 2855 to / à 2873  
are duplicates of  
sont des duplicatas des  
pages 1036 to / à 1054**

## **APPENDIX 02- VFPA PRESENTATION MATERIAL**



PORT of  
**vancouver**

## Vancouver Fraser Port Authority Habitat Enhancement Program

Information Session(s) on VFPA's Aboriginal  
Consultation Process for Habitat Banking Projects

*September 11, 2018 / October 16, 2018 / November 29, 2018*

*Charlotte Olson, Manager, Infrastructure Habitat Development  
Gord Ruffo, Senior Project Manager  
Jemma Scoble, Aboriginal Consultation Support*



## Presentation overview

- **Objectives of Information Session**
- Overview of Habitat Enhancement Program
- Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
- Project example: *New Brighton Park Shoreline Habitat Restoration Project*
- Questions and General Discussion

## Objectives of Information Session

1. To share information with Aboriginal groups on VFPA's consultation process used for delivery of habitat projects that are proposed for VFPA's habitat bank
2. To provide an opportunity for Aboriginal groups to offer input into VFPA's consultation process used for its habitat projects
3. To provide Aboriginal groups with information on how habitat banks are used to offset infrastructure projects



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## Presentation overview

- Objectives of Information Session
- **Overview of Habitat Enhancement Program**
- Overview of Aboriginal Consultation and Engagement on  
Habitat Banking Projects
- Project example: *New Brighton Park Shoreline Habitat  
Restoration Project*
- Questions and General Discussion

## Habitat Enhancement Program

- Proactively creating and enhancing fish and wildlife habitat
- Balancing future infrastructure development with a healthy environment
- A formal Agreement has been established with Fisheries and Oceans Canada (DFO)



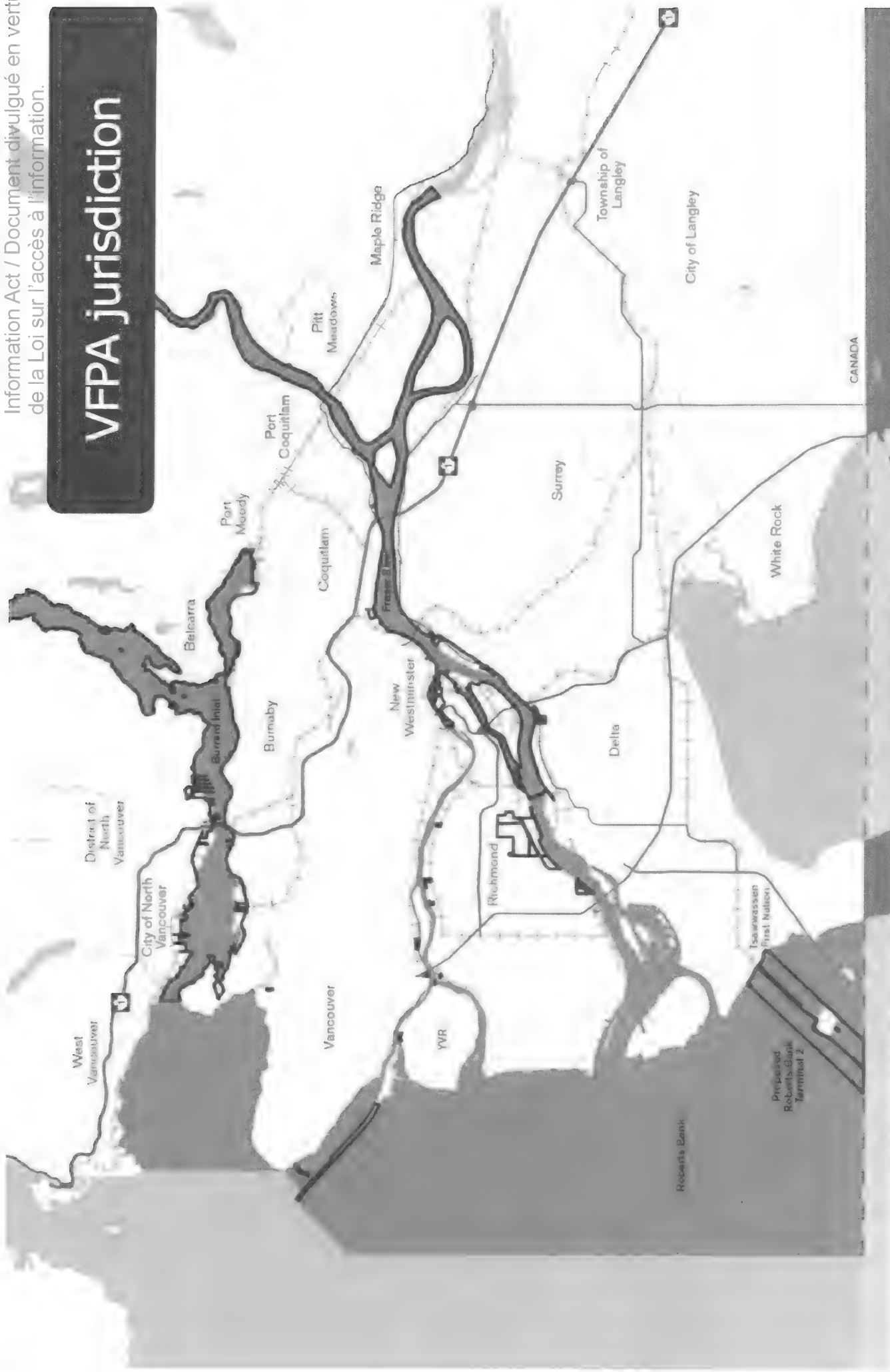
## History and achievements

- The port authority started enhancing habitat in the 1990s
- Since 2013, we have:
  - Created or enhanced 13 habitat sites that would cover an area of more than 13 football fields
  - Completed feasibility work for over 100 hectares of potential habitat enhancement

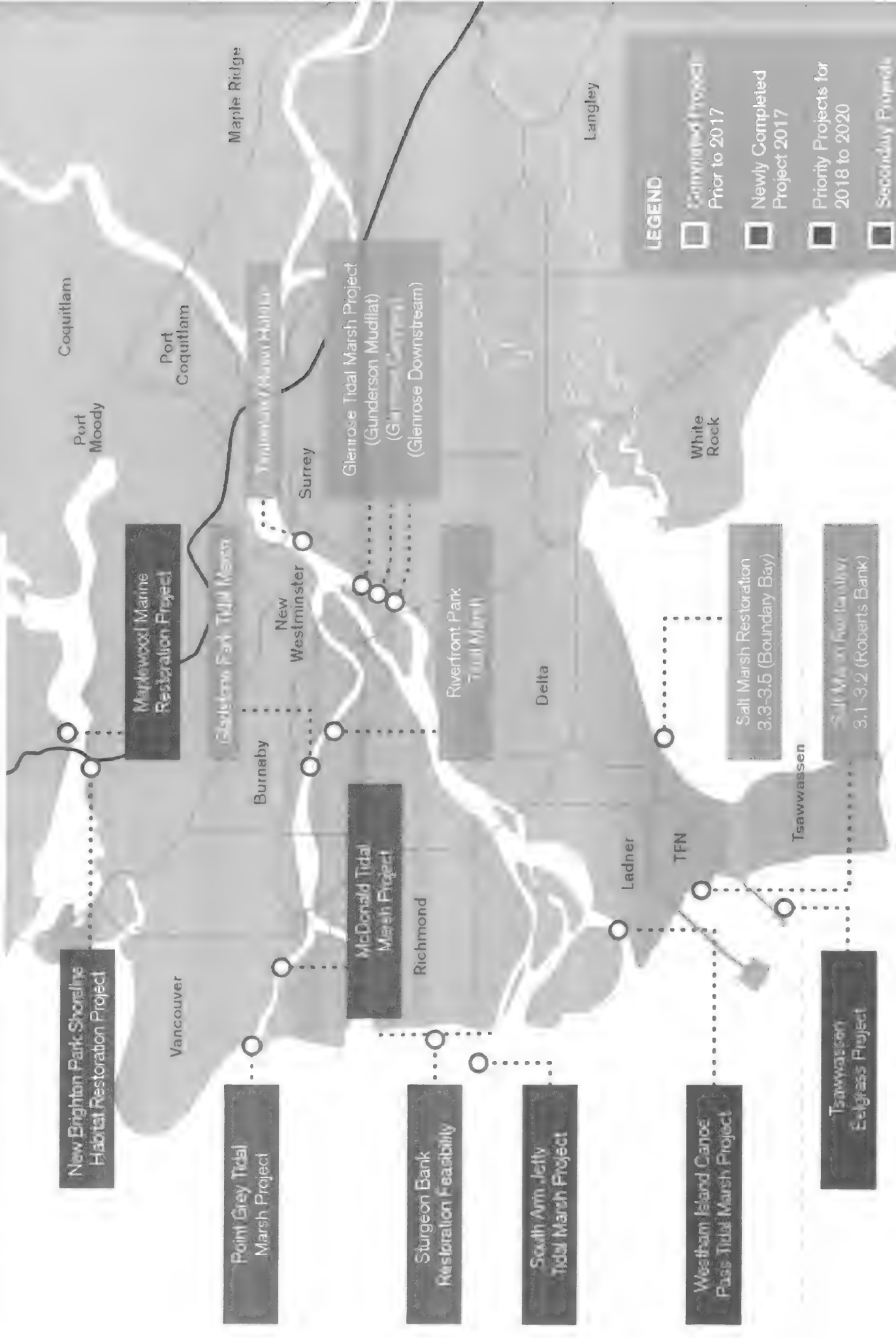
## Considerations for proposed projects

- Considerations for HEP sites:
  - Habitat need
  - Habitat productivity
  - Feasibility
  - Cost
  - Aboriginal group input
  - Stakeholder input

# VFPA jurisdiction



# HABITAT ENHANCEMENT PROGRAM OVERVIEW



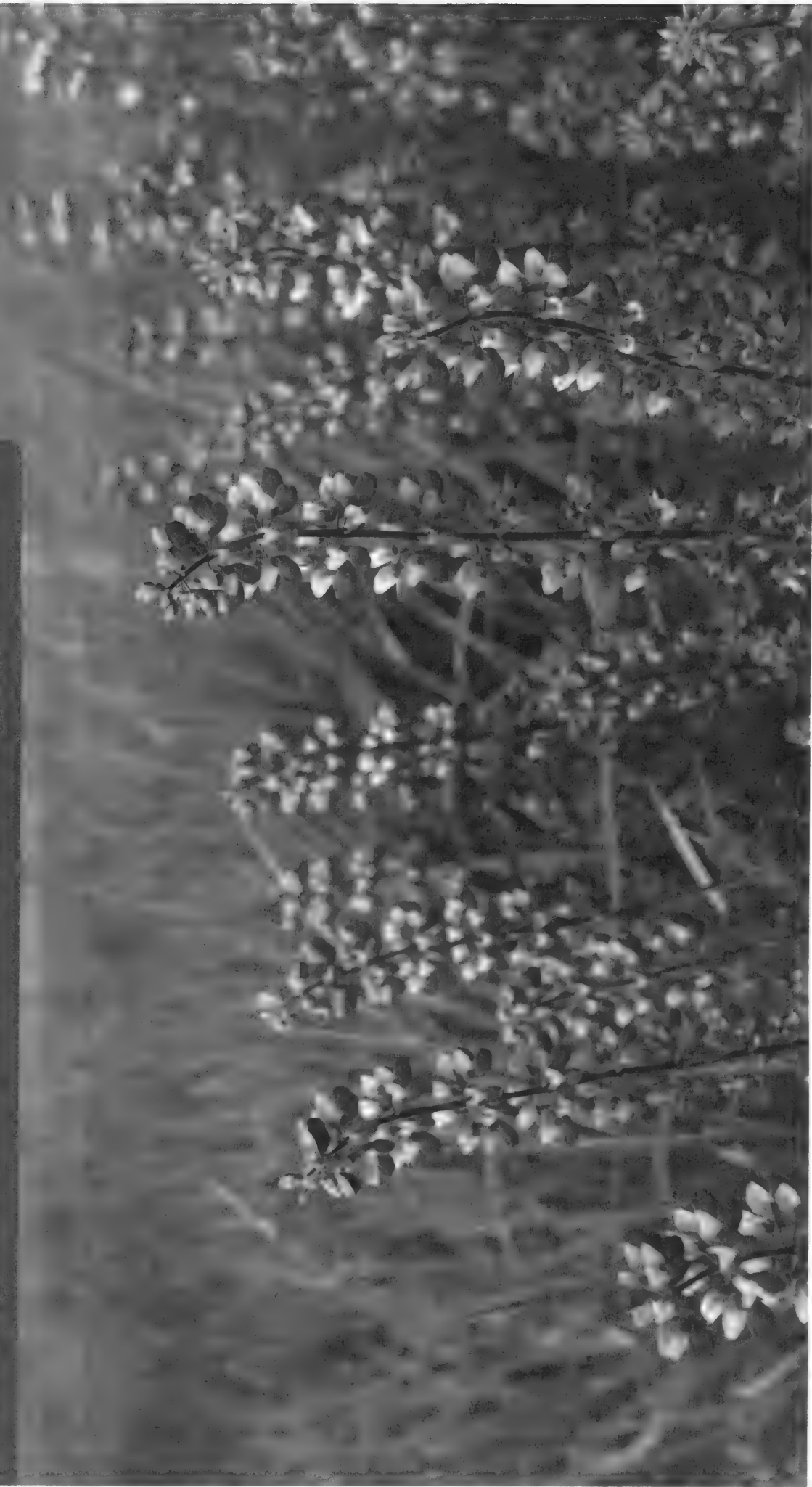


## Presentation overview

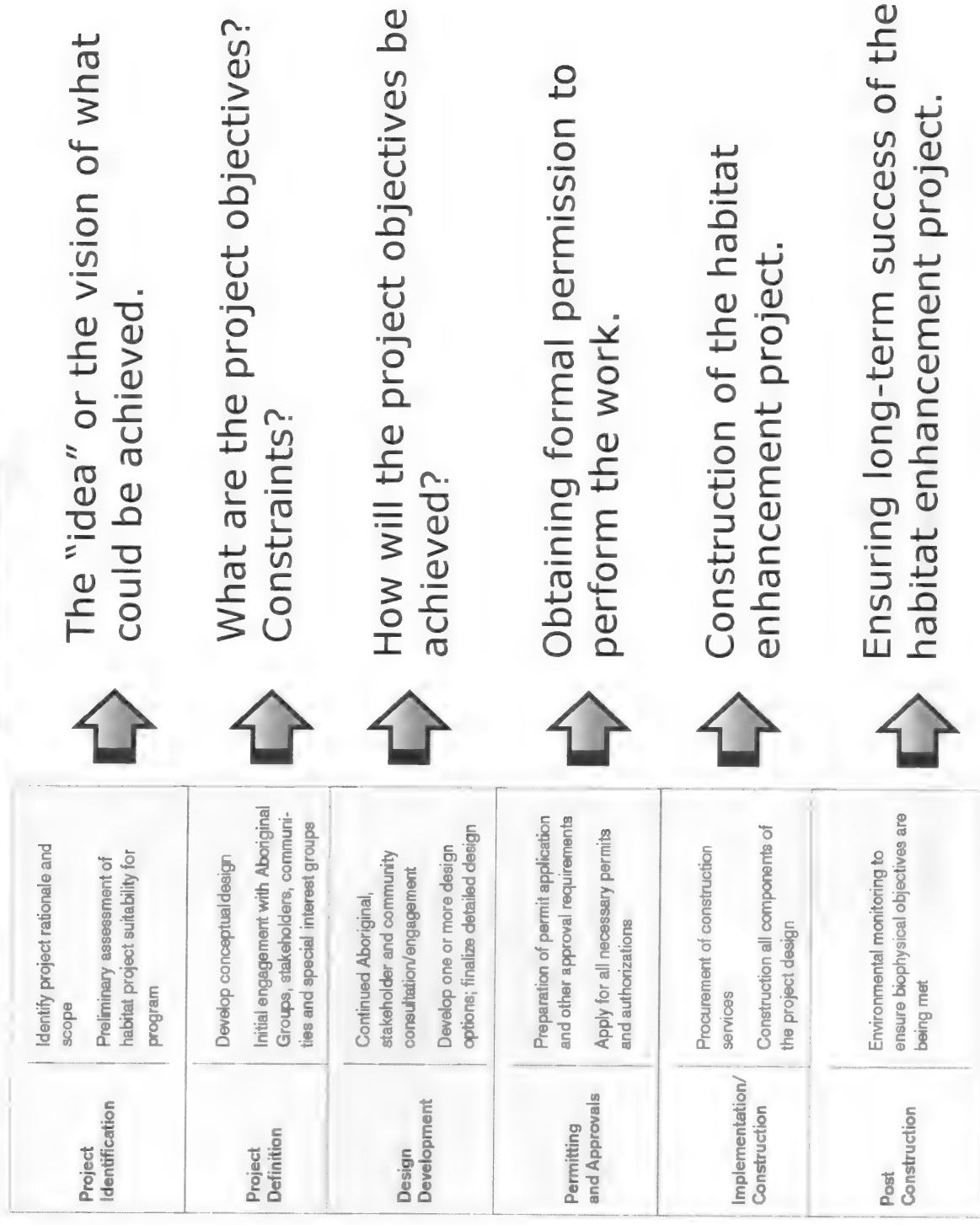
- Objectives of Information Session
- Overview of Habitat Enhancement Program
- **Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects**
- Project example: *New Brighton Park Shoreline Habitat Restoration Project*
- Questions and General Discussion



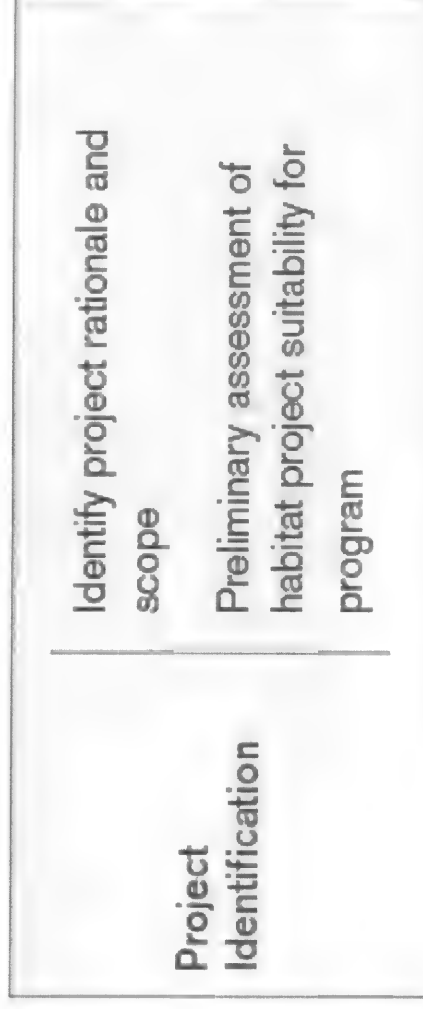
# Aboriginal consultation and engagement



# Project development process



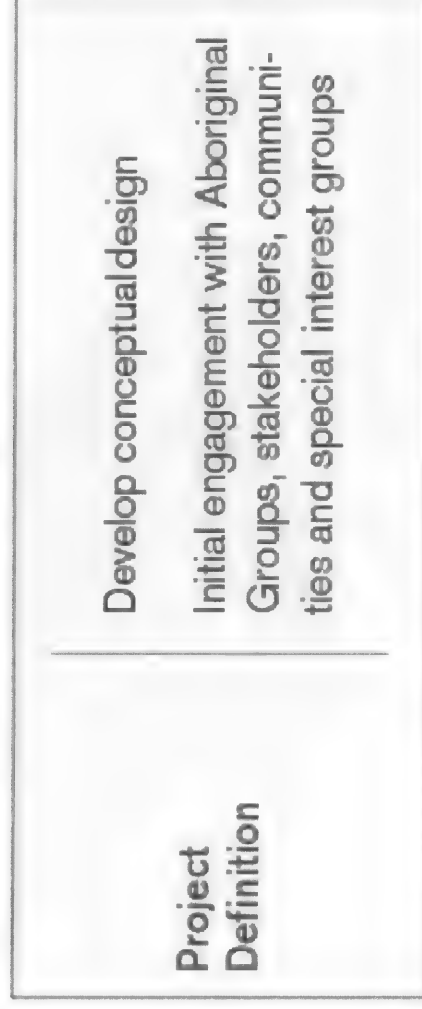
## Project development process



- ✓ HEP seeks input from Aboriginal groups on:
  - Identification of potential habitat enhancement sites
  - Habitat enhancement projects identified by others
- ✓ Aboriginal groups share available traditional knowledge, information and studies

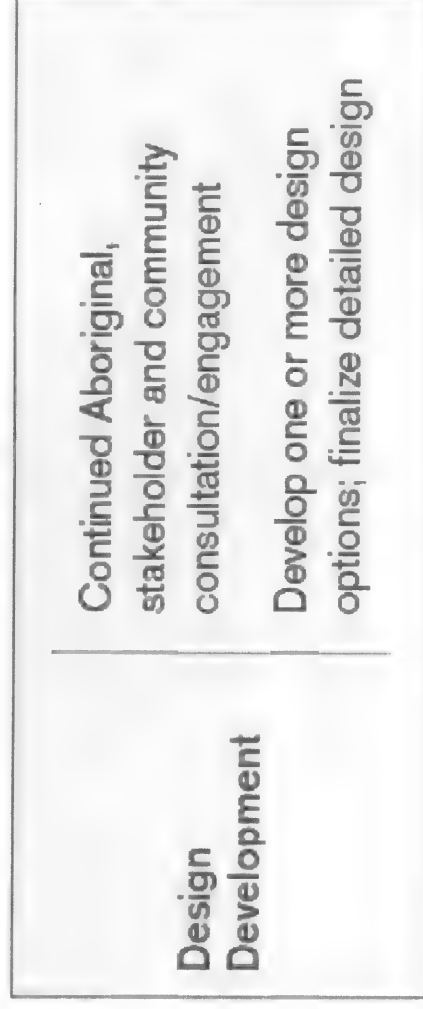


## Project development process



- ✓ Consultation on project concept and engagement activities
- ✓ Identification and engagement on potential habitat values that could be created
- ✓ Aboriginal groups share Traditional Knowledge
- ✓ Identification of opportunity for involving Aboriginal groups in field studies, etc.
- ✓ Planning for Aboriginal involvement throughout project

## Project development process



- ✓ Consultation on design options
- ✓ Consideration of Aboriginal feedback and refinement of project design, where appropriate
- ✓ Finalization of design and sharing with Aboriginal groups
- ✓ Confirmation of habitat values and consultation with Aboriginal groups
- ✓ DFO confirmation of appropriateness of habitat project for HEP
- ✓ Planning for ongoing Aboriginal involvement



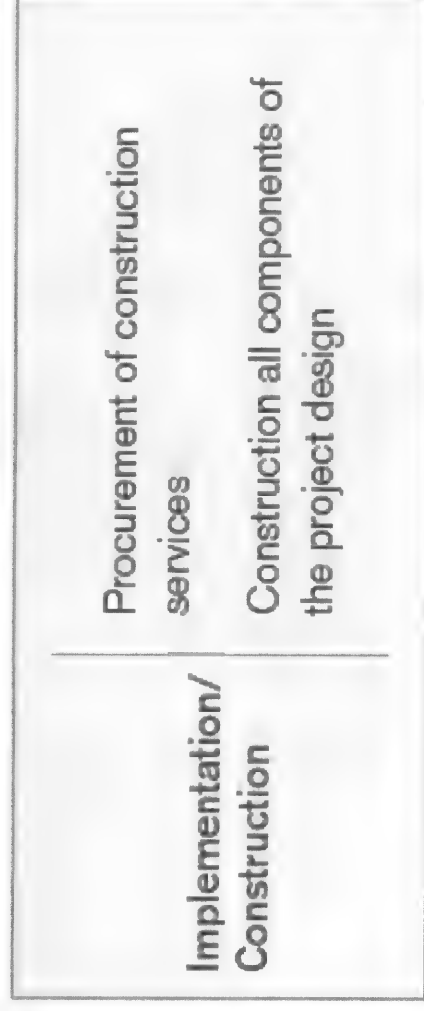
PORT of  
**vancouver**

## Project development process



- ✓ Engagement with Aboriginal groups on permits and approvals
- ✓ Preparation of summary of permits and approvals required and sharing with Aboriginal groups
- ✓ Obtaining Aboriginal input and support on permit applications
- ✓ Notification to Aboriginal groups of submission of permit applications
- ✓ Regulators and permitting authorities may undertake Aboriginal consultation
- ✓ Planning for Aboriginal involvement in subsequent phases

## Project development process



- ✓ HEP identifies approach to procurement and determines opportunities for Aboriginal involvement/benefits
- ✓ Monitoring and communicating conditions included in approvals/permits and commitments to Aboriginal groups
- ✓ Project updates to Aboriginal groups on progress of construction
- ✓ Planning for continued Aboriginal involvement in the post-construction phase

## Project development process



- ✓ Sharing of Post-Construction Monitoring Plan with Aboriginal groups
- ✓ Exploring potential contracting opportunities for Aboriginal groups (e.g. maintenance, monitoring, etc.)



## Presentation overview

- Objectives of Information Session
- Overview of Habitat Enhancement Program
- Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects
- **Project example: *New Brighton Park Shoreline Habitat Restoration Project***
- Questions and General Discussion

# New Brighton Park Shoreline Habitat Restoration Project



# New Brighton Park Shoreline Habitat Restoration Project





## Before construction - 2016



# Construction - October 2016



# Planting – Spring 2017

# plants

Physical wellness can't be separated from the expression of culture.

from the expression of indigenous plants of the area were gathered by our ancestors for nutritional, medicinal, and ceremonial uses. If a plant was harvested, the entire plant was used. Parts of a plant were also harvested at different times for specific purposes. These plants are still gathered today and have a critical role in our culture.



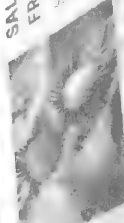
cauamish



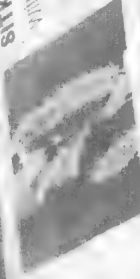
ALTERNATIVE



KELLY-McARTHUR



SALMONBERRY  
FRESH SHOOT



**SITKA WILLOW** | **X<sup>m</sup>e|e|p|**

SITKA WILLOW (P. BENTHAM)



OCEAN SPRAY

1. The first step is to identify the problem.
 2. The second step is to define the problem.
 3. The third step is to analyze the problem.
 4. The fourth step is to develop a solution.
 5. The fifth step is to implement the solution.
 6. The sixth step is to evaluate the solution.
 7. The seventh step is to monitor the solution.
 8. The eighth step is to maintain the solution.
 9. The ninth step is to improve the solution.
 10. The tenth step is to document the solution.

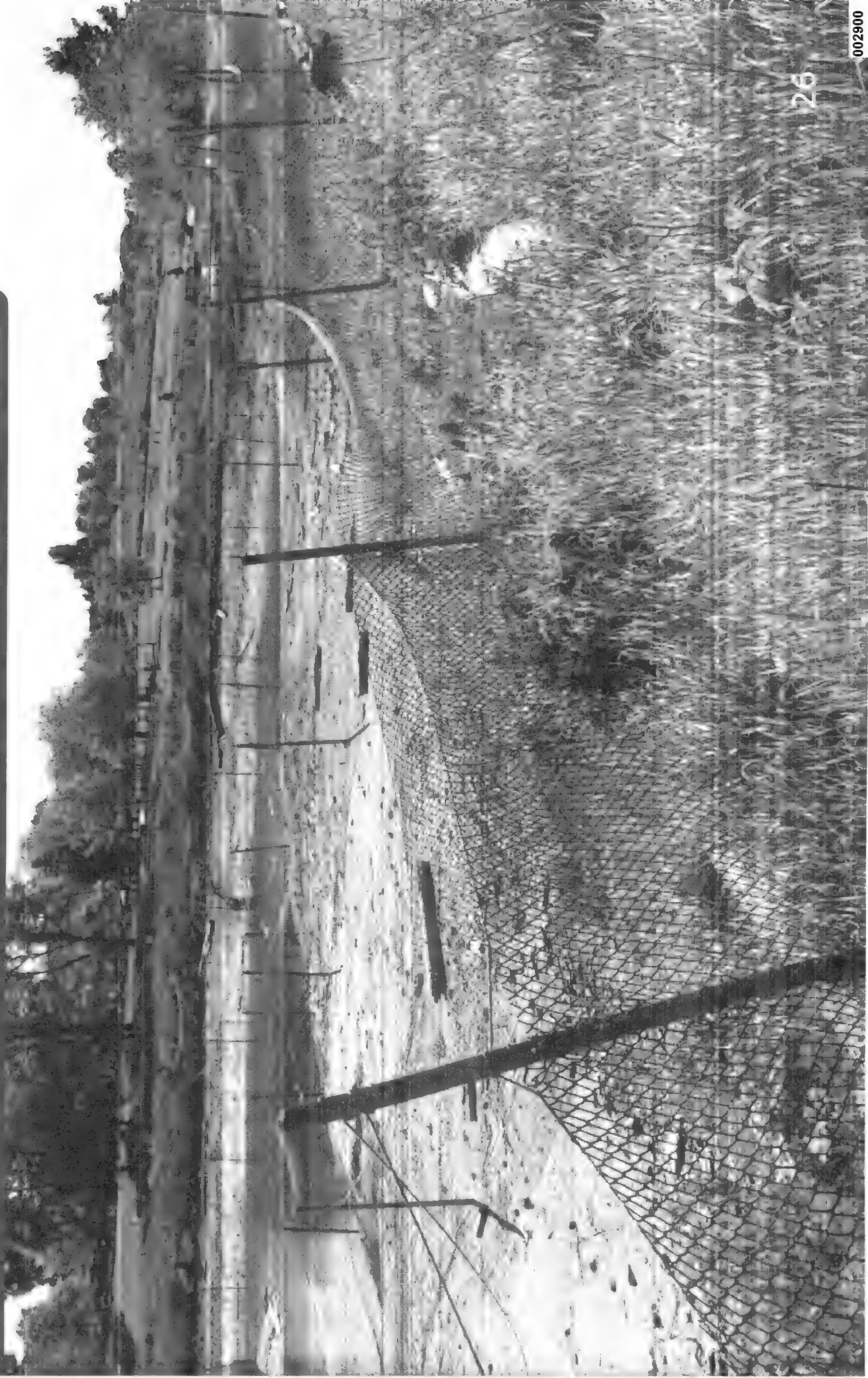
... HABITAT ENHANCEMENT

## Juvenile Salmon - Spring 2018





## Post-Construction Monitoring and Maintenance



Current Status - May 2018



## Presentation overview

- Objectives of Information Session
- Overview of Habitat Enhancement Program
- Overview of Aboriginal Consultation and Engagement on  
Habitat Banking Projects
- Project example: *New Brighton Park Shoreline Habitat  
Restoration Project*
- **Questions and General Discussion**

## Questions?

- Questions on information provided?
- Feedback/initial input
- General discussion



## **APPENDIX 03- DFO PRESENTATION MATERIAL**

**Pages 2905 to / à 2923  
are duplicates of  
sont des duplicatas des  
pages 887 to / à 905**

## **APPENDIX 04- DFO FREQUENTLY ASKED QUESTIONS**

No information has been removed or severed from this page

**Pages 2925 to / à 2927**  
**are duplicates**  
**sont des duplicatas**

**APPENDIX 05-  
MEETING RECORD FROM  
SEPTEMBER 11, 2018 INFORMATION SESSION  
(VANCOUVER)**

**Pages 2929 to / à 2933  
are duplicates of  
sont des duplicatas des  
pages 1124 to / à 1128**

**APPENDIX 06-  
MEETING RECORD FROM  
OCTOBER 16, 2018 INFORMATION SESSION  
(VANCOUVER ISLAND)**

**Pages 2935 to / à 2942  
are duplicates of  
sont des duplicatas des  
pages 1254 to / à 1261**



**APPENDIX 07-  
MEETING RECORD FROM  
NOVEMBER 29, 2018 INFORMATION SESSION  
(FRASER VALLEY)**

## **VFPA-HEP & DFO Consultation with Aboriginal Groups on:**

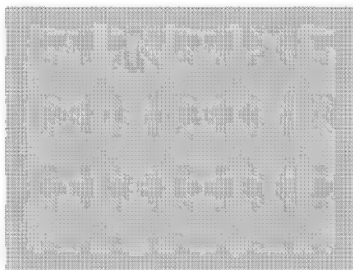
- VFPA-HEP's Consultation Process for Habitat Banking Projects (VFPA)
- Overview of Proponent-led Habitat Banking (DFO)

**Date:** Tuesday, October 16, 2018

**Time:** 9:00 a.m. to 1:30 p.m.

**Location:** Brentwood Bay Resort, Brentwood Bay

## **Participants:**



Jemma Scoble, VFPA  
Sinead Deery VFPA  
Charlotte Olson, VFPA  
Gord Ruffo, VFPA  
[REDACTED] Hemmera

Byron Nutton, DFO  
Suzanne Thorpe, DFO  
Shona Smith, DFO

## **Agenda:**

#	Item
1.	Introductions
2.	VFPA Presentation <ul style="list-style-type: none"> <li>• Objectives of Information Session</li> <li>• Overview of VFPA's Habitat Enhancement Program</li> <li>• Overview of Aboriginal Consultation and Engagement on Habitat Banking Projects</li> <li>• Project example: New Brighton Park Shoreline Habitat Restoration Project</li> </ul>
3.	DFO Presentation <ul style="list-style-type: none"> <li>• Requirements for Fisheries Act Authorizations</li> <li>• Proponent-led habitat banking</li> <li>• Habitat banking arrangements</li> </ul>
4.	Questions and General Discussion

## **Documents Provided:**

1. VFPA Presentation – Information Session on VFPA's Aboriginal Consultation Process for Habitat Banking Projects (VFPA HEP presentation)
2. Overview of Proponent-led Habitat Banking (DFO presentation)
3. Frequently Asked Questions on Proponent-led Habitat Banking (DFO provided)

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

### Summary of Discussions:

An overview of the Habitat Enhancement Program was provided by VFPA. VFPA has had a banking agreement with DFO for the last 5 years and the purpose of the meeting is its renewal.

<VFPA presentation>

A question was asked regarding the word "balance" and what that means to VFPA; whether the port intends to incorporate previous development into finding balance? Clarity was also sought about measuring such balance between infrastructure today and providing a healthy environment, specifically referring to measuring thresholds and confirming "balance". VFPA responded that they generally focused on improving areas that were previously affected (e.g., log debris from booms) and that they consider past/future development and opportunities to restore previously affected areas in order to try to balance impacts from development.

A question was asked about the types of partnerships that VFPA forms with organizations, aside from the habitat banking partnership with DFO. VFPA responded that they have many partnerships and they actively look for opportunities to partner with others. As an example, VFPA partnered to work with Pacific Salmon Foundation (PSF) by providing funding related to research on eulachon on the Fraser.

Comments were made regarding municipal projects, and the level of authority that VFPA and DFO have over such projects when First Nations have concerns about them. VFPA indicated that they try to align with municipalities, when possible but that there are often other factors and priorities that are taken into consideration. DFO advised that they don't have authority over municipalities per se, but that when there is opportunity for habitat restoration, that there is effort to try to link and resolve interests between parties.

Concerns were raised regarding local government allowing effects on habitat due to development, and a desire for DFO to address it. DFO responded that with the new changes to the *Fisheries Act*, there would be opportunity to be (re)involved in integrated planning processes, rather than just considering serious harm to fish, which is a reactive and legislative approach. DFO encouraged engagement on the *Fisheries Act* review.

Additional note: many municipalities have their own environmental departments and by-laws and regulations to support environmental protection within their land boundaries. DFO reviews municipal projects that are likely to result in serious harm to fish or fish habitat but these only account for a small percentage of projects that are undertaken. The province of BC also has regulations that may pertain to municipal projects.

Advice was given to VFPA and DFO that project monitoring (data and results) is of interest to First Nations, as well as determining what obstacles are needed to be overcome to enable a restoration project (e.g., dealing with geese predation at Glenrose). It was also indicated that project monitoring needs to be reported with context of the long term benefits and indicator targets (e.g., reports of fish). VFPA agreed and indicated that post construction updates and reporting is important and advised that this information is shared with interested First Nations. VFPA advised they will continue to improve on the reporting and sharing information.

Concerns were raised regarding monitoring undertaken on restoration projects. There is a need to understand what monitoring is being undertaken and for what purposes.

There was broad discussion about the quantitative analysis and qualitative analysis undertaken to support VFPAs restoration projects. VFPA indicated that monitoring results

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

reports are prepared each year and that measures are taken to accelerate the recovery of habitat and prevent any impacts to restored habitats. To date, VFPA's monitoring has largely been based on standard methodologies and generally, plant-based indicators (e.g. percent vegetation coverage). VFPA advised that there is opportunity to modify the program in place and consider other targets and factors as the program develops. DFO indicated that the habitat program is proponent-led so the indicators and measures are generally proposed by the proponents for acceptance by DFO, and that proponents are responsible to show restoration success prior to the project being accepted for use in a habitat bank as credit. A specific comment was made regarding the importance of the density of eelgrass and its role as an ecosystem health indicator. It was suggested that the indicators should be based on a healthy ecosystem approach, rather than comparison to a reference site that may not be functioning to maximum capacity as a healthy ecosystem/ good indicator.

Concerns were raised regarding project placement (location) and the surrounding conditions (e.g., water quality issues). There was discussion about the choice and establishment of projects, and ensuring projects are located where there is a strong likelihood of success and/or in addressing habitat that is lacking in certain areas, or other limiting factors. As well, VFPA and other agencies consider project benchmarks. This relies on investigation and studies to inform project feasibility. VFPA advised that there is a fundamental basis of scientific research needed and a high degree of comfort that the background work and engineering is sound, as it guides what projects are technically feasible.

Concerns were raised about shellfish closures, contamination and the use of water for cultural reasons, as well as concerns about levels of bacteria and its resulting effects on people. Dredging and industrial development concerns were also raised.

The importance of indicator species (crab, sea urchin) to First Nations was brought forward, as well as the need to ensure sustainable food-based ecosystems to support First Nations food fisheries and rights to harvest. The water being "alive" is an important concept.

Concerns were also raised regarding industries that cause impacts and those industries not having a role to restore/ rehabilitate the areas used. VFPA acknowledged this, but also indicated that they can only address areas within which the port has administration. VFPA discussed the positive merits of working in partnership for restoration projects and advised about how they are trying to set positive examples of successful projects with municipal and public support that other industries can consider in their restoration efforts (e.g., New Brighton Park). VFPA discussed the projects developed on port land and advised that studies are completed to ensure that impacts are avoided as best as possible. VFPA noted that the new projects do not address past effects, per se, but moving forward through the Habitat Enhancement Program they are ensuring that any new impacts are fully mitigated and/ or offset. DFO advised that with regard to past impacts, that the federal government has salmon enhancement funding opportunities available and that the new proposed legislation and upcoming funding opportunities may result in an increased mandate for undertaking additional restorative work (by DFO, or facilitated by DFO).

A concern was raised about a project severely impacting Tsartlip's estuary, where eelgrass and fish passage across a dam were/are purportedly affected by stream restoration works. First Nations expressed that those proponents with funding should have some level of responsibility for these types of projects.

VFPA indicated that their main source of funding is from capital infrastructure at the port and that they are building habitat in advance of port development.

There was discussion on the willingness and capability of VFPA to complete offsets/ habitat banking outside of the Lower Mainland and VFPA indicated that they would be open to

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

consideration of projects within their service area, and on Vancouver Island. First Nations would like to have some projects considered near the Nanaimo River estuary and in the Fraser River (specific to the South Arm). Further engagement will be needed to flesh out potential considerations and understand what projects First Nations would recommend. VFPA advised that they are considering opportunity for a large proposed project referred to as the proposed "South Arm Jetty Tidal Marsh Project", which may have potential restoration opportunity over 30-40ha.

First Nations requested review of project ideas and recommendations that are not currently listed by VFPA, and broadly indicated support for restoration projects in general. There is a desire by Indigenous groups on Vancouver Island to specifically consider proposals for projects on the Fraser River. Concerns were also raised about log storage/ removal, dyking. VFPA advised that they have discussed dyking issues with some municipalities and are considering if there may be opportunities to protect/ enhance habitat, as well as consider implications due to sea level rise.

First Nations discussed the challenges in bringing forward discussion on First Nations history and way of life. Their history dates far back and their legacy defined through stories about how people would travel up the Fraser and camp; and this includes stories of how fish were bought from First Nations right off their boats, and of women roasting ducks harvested from local marshland areas. First Nations want people to know that sea asparagus is edible and that it provides habitat. The interconnectedness of species and habitat is important and has purpose; there are food web linkages, for example, from barnacles to other animals. A high importance is place on teaching and legacy. There is a desire for certain kinds of "legacy projects", to teach others and leave a legacy for young people via engagement in these projects – through pictures and through understanding their culture and history.

<Break>

VFPA discussed the involvement of First Nations in projects and the consultation process undertaken to identify priorities (e.g., for New Brighton: ecological signage including traditional knowledge for education, cultural recognition).

VFPA also discussed the need for maintenance and monitoring when habitat is built.

There was an inquiry about accounting for climate change and VFPA advised that it is addressed in the design phase, especially since most of their habitat restoration is located in areas having coastal/tidal influence. A follow up inquiry was asked about the protection of restoration habitat(s) after they are established. VFPA responded that the restoration areas are designated conservation under VFPA's land use plan. There are protections in place overall for fish habitat, per the BC *Fish Protection Act* and the federal *Fisheries Act*.

<DFO presentation> "Overview of Proponent-Led Habitat Banking"

DFO advises that they will be presenting information on the policy that supports the habitat banking policy as per current legislation. DFO noted that the *Fisheries Act* review and possible amendments are in progress through Parliament but that while the language of the Act may change, the general principles of protecting fish habitat are unlikely to change and there is still expected to be habitat banking defined in the Act.

A comment was made that when referring to guiding principles (#1) that they seem to be supportive of commercial fishery. Questions were asked regarding "Where do First Nations priorities fit in here? What are the local restoration priorities?" A recommendation was made that there should be a separate guiding principle to offset in a way that supports First Nations cultural values. DFO clarified that the guiding principle (#1) includes First Nations fisheries, and is not meant to preclude any type of fisheries.

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

A follow up question was asked regarding guiding principle #2 regarding how offsetting measures would "balance" project impacts and what that means. DFO responded by clarifying that the guiding principles are national principles specific to the offsetting guidance and process. If DFO contemplates issuing an Authorization for serious harm to fish, there is counterbalancing/offsetting of that harm. There was some discussion regarding the process of effects assessment, residual impacts and offsetting those residual impacts, noting that site specific assessments are undertaken to try to understand impacts and offset them.

A question was asked about whether or not DFO works with First Nations directly to understand the impacts? DFO confirmed they do work with First Nations to understand impacts and noted there are 2 parts to habitat banking: i) building habitat prior to building projects requiring offsetting and, ii) issuing of an Authorization from DFO for an impact. There is engagement and consultation on all of these aspects.

A question was raised on whether or not New Brighton Park was offsetting a specific development. DFO responded that that New Brighton was not an offset for a specific development but that habitat banking means you are building the offset up front. At some point down the road, there might be a development that causes an impact and VFPA would apply to use the bank if applicable to their project. Habitat banking is not a typical approach where you build habitat to offset a specific project (i.e., at the same time).

There was discussion regarding use of the term "*conservation project*" in reference to habitat banking. DFO noted that it is a term used in the policy document to distinguish between a habitat development project and an offsetting project. First Nations noted that there may be concerns with the term because Aboriginal rights can be set aside in favour of conservation; they feel the reference needs to be changed. New Brighton Park shouldn't be considered a conservation project; rather it should be described as a habitat enhancement project. This is important in relation to Aboriginal rights and title interests. There is also strong concern that a proponent may unduly sway the Crown in terms of habitat banking project use. The concern is that proponents have a "bank" they can automatically draw from, with construction down the road. DFO noted the terminology concern and also advised that *Fisheries Act* may change; however, the new Act is likely to be supportive of habitat banking. The information we have is that the proposed Act is likely to take elements of the policy and bring it into the new *Fisheries Act* on a more formal basis as a way to deal with offsetting.

Concerns were raised regarding the overall concept of habitat banking and that it could be used to unduly sway the Crown to grant an Authorization (if habitat is already banked).

A general concern was also raised by First Nations regarding a need for addressing dyking on the South Arm of the Fraser River at a strategic/ innovative level. First Nations are very connected to this land, and its water and resources; as well, it affects several aboriginal fisheries. There is a need for DFO to help to deal with fisheries issues in the area. DFO noted the concern and committed to bring this up to other sectors in the Department. DFO advised that efforts are being made to try to balance benefits of habitat banking (i.e., doing things up front) to make sure that down the road, when it is being used to offset, there is a really clear understanding of the specific benefits of the banking project to balance the impacts of the project. It was further noted that having a habitat bank doesn't guarantee that you will receive an Authorization as the impacts would be evaluated separately from the offsetting.

Concern was raised that DFO doesn't say "no" to projects. Examples of projects where DFO has not granted an Authorization were briefly discussed (e.g., Fish Lake (Taseko)). DFO explained that even if an Authorization isn't denied, proponents often 'cut their losses' earlier in the review process, so a project review doesn't often conclude by 'denying' an

## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

Authorization. Such projects are often rescinded by proponents then sometimes resubmitted after having been relocated or revised. Regulatory staff review the projects and apply standard mitigation measures to avoid impacts. There is reliance on consultants, as qualified professionals, to design a project to avoid/mitigate impacts to fish and fish habitat.

Under the new *Fisheries Act*, a public registry of projects is proposed.

Concerns were noted regarding Atlantic fish farms.

Additional habitat bank concerns were raised about the projects being discussed being tied to specific locations - that DFO was requesting acceptance of impacts in relation to those projects at this time.

**Additional note:** DFO is not undertaking any projects-specific consultations to exercise any legislative authority under the Act at this time. The intent of this meeting was to discuss the VFPA-DFO arrangement that may enable future habitat projects, and determine how First Nations would like to engage on habitat banking.

DFO clarified that consultation will be completed when the impact is proposed and that consultation for a *Fisheries Act* Authorization is required when DFO contemplates a decision under the Act. This is what the Fisheries Protection Program does. DFO consults on the impacts being proposed and on whether all the avoidance/mitigation measures have been applied, and what should be done to offset impacts. Although there is some uncertainty around offsetting (i.e., is it functioning or not?), the intention of habitat banking is that there is benefit from having certainty of whether the habitat is functioning and productive.

There was discussion on habitat creation; land-based vs habitat created in the ocean. DFO indicated that habitat creation is somewhat different than restoration. Restoration is the rehabilitation of something which was previously fish habitat that may have been lost, whereas habitat creation is about creating something new. The intention of habitat banking is to create and improve net benefits to fish.

There is a strong desire from First Nations to be brought in early to discuss habitat banking at the forefront when habitat banking is being planned, not just when there is a project requiring consultation. With regard to "habitat" it needs to be recognized that you can't create habitat, you can only change habitat and that you are displacing something to create habitat, whether or not it is land-based and that, too, needs to be accounted for. There were questions regarding when consultation effort was undertaken by DFO in regards to habitat banking. DFO confirmed that the federal legal consultation requirement is as part of a permitting authority.

There was some discussion on what this means. DFO advised that if there is no serious harm to fish that proponents would not need Authorization - prior to building some types of habitat banking projects (i.e., if the project was land-based). For New Brighton Park, VFPA excavated historically placed fill, that had been placed to build an upland park. The park wasn't providing a benefit to fish, now it is. It did not require a *Fisheries Act* Authorization.

Concern was expressed regarding this approach to habitat banking and the need for Authorization for the New Brighton Park project as it is attached to a major water source. From a First Nations perspective, the area is occupied and used and consultation is needed when making those changes.

There was discussion on consultation. Concerns were expressed that the Nations present aren't being sufficiently consulted. It was expressed that Aboriginal rights and title (under the Douglas Treaty) are perpetual and that the First Nations need to preserve their relationship with the Crown and ensure they do not fetter those rights. Habitat banking should be viewed under a full-spectrum lens to ensure consultation is fulsome and adequate.



## VANCOUVER FRASER PORT AUTHORITY | MEETING NOTES

DFO noted that while habitat banking in concept isn't new, that the point of meeting now is to advise that the Port has a habitat bank, that the DFO-VFPA habitat bank agreement is being renewed and as well, to receive input on VFPA's consultation process related to their habitat banking projects. It is not intended this to be consultation on the overall system of habitat banking, although those concerns will be noted.

Participants advised that they haven't been included in previous conversations on habitat banking with DFO and that in light of reconciliation, First Nations communities should be included in all decision making relevant to their lands, waters, resources including those regarding habitat banking. Habitat banking needs to be discussed at the point that projects are being initiated. First Nations expressed their desire to be involved in decision-making and in setting goals together for habitat banking that are acceptable to First Nations. Traditional knowledge should be considered, with the end goal of consumption in mind.

VFPA responded that they will discuss the development of objective measures and the incorporation of First Nations into project planning and project development. They advised that the projects recently completed were improved due to working with First Nations from the beginning. VFPA advised that they want to know how to implement this and work with Nations and determine what that looks like [for each Nation]. The proposed process presented is a starting point, and VFPA is seeking advice on defining and creating the path forward.

VFPA and DFO acknowledged that there may be a need for further discussions on habitat banking projects. These discussions are on the current proposed arrangement between VFPA and DFO, which is a high level arrangement that isn't specific to projects at the ground level. The arrangement itself is about how to manage, build and deliver on habitat banking projects. Processes for seeking input on projects and gaining input are not concluded, and this approach is to gather input from the beginning to inform later stages and determine how Nations wish to be engaged/ consulted.

First Nations consider it a significant issue that they feel they are forced into a pre-approval, pre-consultation environment for habitat banking - not specifically in relation to VFPA but in general. There is a strong desire to understand what all of the projects are, what projects will be proposed or put forward ahead of others and why. The process is as important as the outcome decisions for habitat banking projects and this is very important.

There was discussion on the Douglas Treaty as First Nations advised that the Douglas Treaty has never been recognized by DFO. There is concern that it has not been acknowledged but that DFO wants their consideration for habitat banking. Sentiment was expressed that habitat banking is a way out of infringement and that DFO is justifying infringement on Aboriginal and treaty rights - should call it an "infringement bank". There is a strong desire across all levels of government for meaningful engagement.

VFPA and DFO committed to follow up with attendees and provision of summary notes. Consideration will be given to a follow up meeting should attendees wish to have further discussion regarding issues that were brought up, and on the processes and proposed DFO-VFPA habitat banking arrangement.



**Pringle, Sarah**

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**From:** Webb, Cheryl  
**Sent:** March-28-19 6:16 PM  
**To:** Fanos, Brad  
**Subject:** RE: VFPA Habitat Banking Arrangement

C

**From:** Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>  
**Sent:** Thursday, March 28, 2019 6:13 PM  
**To:** Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>  
**Subject:** Re: VFPA Habitat Banking Arrangement

Thanks

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

**From:** "Webb, Cheryl" <[Cheryl.Webb@dfo-mpo.gc.ca](mailto:Cheryl.Webb@dfo-mpo.gc.ca)>  
**Date:** 2019-03-28 6:11 PM (GMT-08:00)  
**To:** "Fanos, Brad" <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>, "Pringle, Sarah" <[Sarah.Pringle@dfo-mpo.gc.ca](mailto:Sarah.Pringle@dfo-mpo.gc.ca)>  
**Cc:** "Sandgathe, Tracey L" <[Tracey.Sandgathe@dfo-mpo.gc.ca](mailto:Tracey.Sandgathe@dfo-mpo.gc.ca)>  
**Subject:** RE: VFPA Habitat Banking Arrangement

I am comfortable with have someone sign on my behalf...

**From:** Fanos, Brad <[Brad.Fanos@dfo-mpo.gc.ca](mailto:Brad.Fanos@dfo-mpo.gc.ca)>  
**Sent:** Thursday, March 28, 2019 6:06 PM  
**To:** Pringle, Sarah <[Sarah.Pringle@dfo-mpo.gc.ca](mailto:Sarah.Pringle@dfo-mpo.gc.ca)>; Webb, Cheryl <[Cheryl.Webb@dfo-mpo.gc.ca](mailto:Cheryl.Webb@dfo-mpo.gc.ca)>  
**Cc:** Sandgathe, Tracey L <[Tracey.Sandgathe@dfo-mpo.gc.ca](mailto:Tracey.Sandgathe@dfo-mpo.gc.ca)>  
**Subject:** Re: VFPA Habitat Banking Arrangement

If Cheryl is supportive either Tracey or I can sign on her behalf on fri. No outstanding issues as TWN is aware and supports our path forward

s.19(1)  
s.21(1)(b)

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "Pringle, Sarah" <Sarah.Pringle@dfo-mpo.gc.ca>  
Date: 2019-03-28 1:45 PM (GMT-08:00)  
To: "Fanos, Brad" <Brad.Fanos@dfo-mpo.gc.ca>, "Nutton, Byron" <Byron.Nutton@dfo-mpo.gc.ca>  
Subject: RE: VFPA Habitat Banking Arrangement

Brad,

Would you like me to hold these until Monday for her signature?

Sarah

From: Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>  
Sent: March-28-19 1:39 PM  
To: Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Pringle, Sarah <Sarah.Pringle@dfo-mpo.gc.ca>  
Subject: Re: VFPA Habitat Banking Arrangement

Great yes I agree we are good to release

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "Nutton, Byron" <Byron.Nutton@dfo-mpo.gc.ca>  
Date: 2019-03-28 1:21 PM (GMT-08:00)  
To: "Fanos, Brad" <Brad.Fanos@dfo-mpo.gc.ca>  
Cc: "Hwang, Jason" <Jason.Hwang@dfo-mpo.gc.ca>  
Subject: RE: VFPA Habitat Banking Arrangement

I just spoke with TWN. The short version is we are all good!

Cheryl is leaving the office soon. Sarah has the hardcopies, but waiting to hear from you.

From: Nutton, Byron  
Sent: 2019-March-28 9:28 AM  
To: Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>  
Cc: Hwang, Jason <Jason.Hwang@dfo-mpo.gc.ca>  
Subject: VFPA Habitat Banking Arrangement  
Importance: High

s.19(1)

As discussed, please find the following update and next steps related to sign-off of the renewed VFPA Habitat Banking Arrangement.

UPDATE:

- Two hardcopies of the final version of the renewed VFPA Habitat Bank Arrangement with VFPA signatures were received at RHQ on Tuesday, March 26 for counter-signature by the RD

- Suzanne has completed a QA/QC against the digital copy forwarded for RD's consideration and confirmed they are the same
- VFPA is expecting the Arrangement to be executed prior to expiry of the current Agreement on March 31, 2019
- Suzanne has advised that the RD will not be in the office on Friday, March 29
- TWN has recently advised that they will not be forwarding a letter at this time stating that they have no objection to the Arrangement, as was previously expected, due to delays in finalizing a separate bi-lateral agreement with VFPA
- At March 5, 2019 meeting with TWN DFO confirmed that measures to address previous concerns raised by TWN have been incorporated into the Arrangement:

- o Concerns surrounding the "sale" of credits are addressed under the new Arrangement in that VFPA would not be able to sell/transfer credits, but could use their credits on behalf of a third party as described in Annex A.
- o Early engagement on the development of habitat banking projects is addressed and included in Annex G: Indigenous Consultation and Engagement: Habitat Banking Project Development by HEP (VFPA's Habitat Enhancement Program).
- o Consultation upon contemplation of a regulatory decision by DFO is addressed in Appendix F: Indigenous Consultation and Engagement: Use of Habitat Credits to Meet Offsetting Requirements of a *Fisheries Act* Authorization.
  - The only concern not entirely resolved, however unlikely, is that a situation could arise where DFO's scope of consultation on impacts related to a future Authorization might not include TWN, although credits from habitat banking project in TWN traditional territory are used as offsetting. This has been largely mitigated by the reduced scope of the Service Area for the Arrangement

#### NEXT STEPS:

1. Byron to inform TWN that the Arrangement is being executed
2. Suzanne to return hardcopies to RD's EA

## Thorpe, Suzanne

---

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** Friday, March 29, 2019 4:16 PM  
**To:** Nutton, Byron  
**Cc:** Thorpe, Suzanne  
**Subject:** RE: VFPA-DFO Habitat Banking Arrangement - rush couriered Attention to Chery Webb now

Thanks Byron that's excellent!

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development  
CELL: 604.349.4111

**From:** Nutton, Byron [mailto:Byron.Nutton@dfo-mpo.gc.ca]  
**Sent:** Friday, March 29, 2019 4:01 PM  
**To:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Cc:** Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>  
**Subject:** FW: VFPA-DFO Habitat Banking Arrangement - rush couriered Attention to Chery Webb now

FYI

**From:** Pringle, Sarah <Sarah.Pringle@dfo-mpo.gc.ca>  
**Sent:** 2019-March-29 3:47 PM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>  
**Cc:** Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>  
**Subject:** RE: VFPA-DFO Habitat Banking Arrangement - rush couriered Attention to Chery Webb now

Hi Bryon.

I just want to let you know this Arrangement has been signed by DFO.

Can you please notify VFPA know we've complete this and will be sending over their copy on Monday, April 1?

Please let me know if you or VFPA require any further action,

Sarah

**From:** Olson, Charlotte <Charlotte.Olson@portvancouver.com>  
**Sent:** March-26-19 10:58 AM  
**To:** Nutton, Byron <Byron.Nutton@dfo-mpo.gc.ca>; Thorpe, Suzanne <Suzanne.Thorpe@dfo-mpo.gc.ca>; Pringle, Sarah <Sarah.Pringle@dfo-mpo.gc.ca>  
**Cc:** Ryan, LeeAnn <LeeAnn.Ryan@portvancouver.com>  
**Subject:** RE: VFPA-DFO Habitat Banking Arrangement - rush couriered Attention to Chery Webb now  
**Importance:** High

Hi Byron, Suzanne and Sarah

s.19(1)

Per below, please note that VFPA has just couriered 2 hard-copies of the signed VFPA-DFO Habitat Bank Arrangement to DFO's Vancouver office at suite 200-401 Burrard Street with **Attention To: Cheryl Webb**.

Sarah it should arrive within 2hrs, please keep an eye out for it – and if you have any questions, please contact LeeAnn Ryan (copied here and below).

Regards,  
Charlotte

**Charlotte Olson** P.Geo., PMP  
Manager, Infrastructure Habitat Development



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9590 | CELL: 604.349.4111  
[portvancouver.com](http://portvancouver.com)

**From:** Ryan, LeeAnn  
**Sent:** Tuesday, March 26, 2019 10:48 AM  
**To:** Olson, Charlotte <[Charlotte.Olson@portvancouver.com](mailto:Charlotte.Olson@portvancouver.com)>  
**Cc:** Assier, Gilles <[Gilles.Assier@portvancouver.com](mailto:Gilles.Assier@portvancouver.com)>; Bryce, James <[James.Bryce@portvancouver.com](mailto:James.Bryce@portvancouver.com)>; Tchakedjian, Taleen <[Taleen.Tchakedjian@portvancouver.com](mailto:Taleen.Tchakedjian@portvancouver.com)>  
**Subject:** Habitat Banking Agreement

I just dropped envelope (containing two signed agreements) off at reception and told them to put it on a rush. It will be there within 2 hours.

**LeeAnn Ryan**  
Executive Assistant, Legal Services



**Vancouver Fraser Port Authority**  
100 The Pointe, 999 Canada Place  
Vancouver, B.C. Canada V6C 3T4  
P: 604.665.9051  
[portvancouver.com](http://portvancouver.com)



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

Fish and Fish Habitat  
Protection Program

Programme de protection du  
poisson et de l'habitat du poisson

Director

Directeur

UNCLASSIFIED

2019-505-00014  
EKME #: 4030787

MEMORANDUM FOR THE REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT  
BRANCH

**RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT WITH  
VANCOUVER FRASER PORT AUTHORITY  
(FOR DECISION)**

**SUMMARY OF ADVICE TO REGIONAL DIRECTOR, ECOSYSTEMS  
MANAGEMENT BRANCH**

The purpose of this note is to seek approval of a renewed Habitat Bank Arrangement (the Arrangement) with Vancouver Fraser Port Authority (VFPA).

If approved, the Arrangement will replace the current habitat banking Working Agreement established between the DFO and VFPA in 2012 and scheduled to expire on March 31, 2019, and will be valid for a period of 15 years, with provision for review every five years.

The Arrangement establishes the terms and conditions for the renewed management of the Port of Vancouver Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016).

Engagement and consultation with Indigenous groups with asserted or traditional territories or treaty lands within the service area of the Arrangement was jointly undertaken by DFO and VFPA. While few, the key concerns, issues and input received have been considered and the consultation process has been concluded.

It is recommended that you approve and provide your signature to the renewed VFPA Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

## **BACKGROUND**

Over the past two years, since the release of *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016), DFO and VFPA have been negotiating an updated and renewed proponent-led Habitat Banking Arrangement to replace the *Working Agreement Concerning Procedures for Development and Operation of the Port Metro Vancouver Habitat Bank* (2012).

The 2012 Agreement was set to expire in 2017, but was extended by letter to March 31, 2019 in order to allow for continued negotiation of a renewed Arrangement and for Indigenous engagement and consultation processes to be completed.

Several major considerations in the renewal of the Arrangement have been reconciled, including:

- **Use of Credits by 3<sup>rd</sup> parties:** The Interim Guide specifies that habitat credits can only be used by the proponent responsible for implementation of the bank; however, VFPA strongly felt they required the ability to transfer credits to offset tenant and/or third party-led infrastructure projects – a provision which was provided in the 2012 Agreement. In the proposed renewed arrangement the use of third party credits is limited to the defined service area boundaries, and is solely in relation to development activities that support VFPA in fulfilling its mandate. VFPA will retain its authority over the habitat bank and be responsible to ensure successful design, construction, monitoring, maintenance and long-term protection and stewardship of the habitat banking project sites.
- **Credit valuation:** The Interim Guide suggests that habitat credit valuation be mutually agreed up on based on the value of habitat and units of measure, tied to indicators, benchmarks and targets as determined through monitoring. However, there is limited guidance on when such credits can be withdrawn or moreover, whether or not bank credit can be withdrawn prior to its full function as habitat. VFPA and DFO have agreed to a process for habitat credit valuation, based upon detailed inventory and assessment of the habitat pre-construction, with the system of withdrawal based upon monitoring success and confirmation/ evaluation of the value of habitat *at the time of withdrawal* post-construction.
- **Land tenure:** Project site ownership or land tenure is deemed necessary to implement the habitat banking projects and ensure the long-term protection, similar to the requirements for project specific offsetting (i.e., conventional offsetting). VFPA had concerns regarding inconsistency in the requirement for land tenure (i.e., between practice and policy) however, VFPA has agreed to ensure land ownership, lease, license or other agreement is secured for all habitat banking projects until the withdrawal of the habitat credits from the bank.

.../3

## **STRATEGIC CONSIDERATIONS**

The existing Port of Vancouver Habitat Bank has been in place since September 2012 (approximately 6 ½ years) and is set to expire on March 31, 2019. The proposed new Arrangement establishes the terms and conditions for the renewed management of the Habitat Bank based on the guidance and template provided in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October 2016).

VFPA has maintained that the Habitat Bank is an important element of their overall business plan, and supports them in achieving their goal of ensuring that fish and fish habitat are considered in the development of the Asia-Pacific gateway.

Existing Fisheries Protection Program policies support habitat banking, and identify it as one mechanism that assists DFO in achieving its strategic outcome of *sustainable aquatic ecosystems*. In addition, the currently proposed amendments to the *Fisheries Act* include provisions that will formalize and further support habitat banking as an element of DFO's overall program delivery, should those amendments receive royal assent.

The proposed term of the Arrangement is 15 years, but consistent with the template provided in the guidance document it includes a provision for DFO to exercise an option to conduct a review every 5 years.

Significant effort has been invested by both DFO and VFPA over the past 2 ½ years conducting Indigenous engagement and negotiating the terms and conditions as proposed. Failure to execute the renewed Arrangement prior to the expiration of the current agreement on March 31<sup>st</sup> may jeopardize the continuation of the Port of Vancouver Habitat Bank.

## **INDIGENOUS CONSULTATIONS**

DFO and VFPA cooperatively developed and implemented an Indigenous engagement plan, and produced and distributed a report (*Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement*) documenting the engagement and providing responses to concerns brought forward.

Based on input received during the engagement process the following changes were incorporated into the Arrangement:

- DFO and VFPA agreed to change the standardized terminology from “conservation project” to “habitat banking project” in the final version of the Arrangement to better describe the purpose of the projects and to address Indigenous concerns related to the potential for “conservation” to be considered ahead of Indigenous interests.
- VFPA updated their framework for conducting consultation associated with future proponent-led habitat banking projects.

.../4



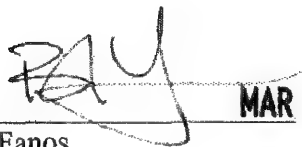
The Tsleil-Waututh Nation (TWN) declined to participate in the joint DFO-VFPA engagement process; however, both VFPA and DFO have engaged with them separately. Concerns raised by TWN early on have been addressed through the drafting of terms and conditions in the Arrangement and no additional concerns were raised at the most recent meeting on March 5, 2019.

#### **EXTERNAL CONSULTATIONS**

No external consultations were conducted beyond the engagement with Indigenous groups documented above.

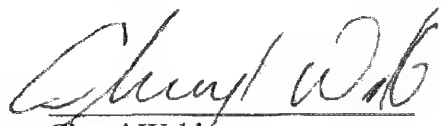
#### **ADVICE AND RECOMMENDATIONS TO REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT BRANCH**

It is recommended that you approve and provide your signature to the renewed Port of Vancouver Habitat Bank Arrangement before the current agreement expires on March 31, 2019.

  
**MAR 14 2019**

Brad Fanos  
Director  
Fish and Fish Habitat Protection Program

- ☒ I concur with the recommendations  
☐ I do not concur with the recommendations

  
Cheryl Webb  
Regional Director  
Ecosystem Management Branch

#### Attachments (2):

- 1) Habitat Bank Arrangement: Port of Vancouver Habitat Bank (EKME #4030791)
- 2) Summary of Indigenous Engagement on VFPA and DFO's Habitat Bank Arrangement (EKME #4030794)

**Habitat Bank Arrangement:**

**PORT OF VANCOUVER HABITAT BANK**

Between

**VANCOUVER FRASER PORT AUTHORITY**

AND

**HER MAJESTY THE QUEEN IN RIGHT OF CANADA**, as represented by the Minister of Fisheries and Oceans on behalf of Fisheries and Oceans Canada ("DFO")

March 29, 2019

**PATH Number: 19-HPAC-00125**

## 1. INTRODUCTION

This document sets out the principles of the mutual understanding between **Vancouver Fraser Port Authority ("VFPA")** and Fisheries and Oceans Canada ("DFO") (hereafter referred to as "the Participants") for the **Port of Vancouver Habitat Bank ("Habitat Bank")**.

### WHEREAS:

- a. Fisheries and Oceans Canada (DFO) is responsible for the administration of the *Fisheries Act*, more specifically the fisheries protection provisions including sections 6, 20, 21, 35, 37, and 38 related to the conservation and protection of Canada's marine and freshwater fisheries resources and their habitats from the impact of human activities. The purpose of the fisheries protection provisions, as set out in section 6.1 of the *Fisheries Act*, is to provide for the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries;
- b. DFO is responsible for the administration of the *Species at Risk Act* ("SARA") with respect to aquatic species other than those individuals in or on federal lands administered by the Parks Canada Agency and, in that capacity, the Minister of Fisheries and Oceans has powers and duties with respect to protecting aquatic species listed under that Act and providing for their recovery;
- c. The Fisheries Protection Policy Statement's goal is to promote compliance with the *Fisheries Act* in order to contribute to the purpose set out in section 6.1 of the *Fisheries Act*;
- d. This Arrangement does not commit DFO to the authorization of any future work, undertaking or activity requiring an authorization under paragraph 35(2)(b) of the *Fisheries Act*, or permit any future project requiring a permit under sections 73 and 74 of the *Species at Risk Act*. All future projects will be reviewed on their own merit and a decision on whether to authorize or permit will be made independent of the existence of a habitat bank arrangement. This Arrangement, and any related communications between DFO and VFPA do not constitute a representation or commitment of any kind regarding authorization of any future projects by DFO. This Arrangement, and any related communications, moreover does not constitute a commitment that any habitat credits that may be issued will be acceptable in the context of future applications for *Fisheries Act* authorizations or SARA permits.
- e. VFPA is a port authority established by the Government of Canada pursuant to the *Canada Marine Act* and is accountable to the federal Minister of Transport. VFPA has a mandate to facilitate Canada's trade objectives, ensuring goods are moved safely, while protecting the environment and considering local communities. In fulfilling the mandate, VFPA carries out a variety of duties, including infrastructure development to support growth and efficient operations. The Habitat Bank can support such infrastructure development when habitat credits are acceptable in the context of future *Fisheries Act* authorizations or SARA permits.

- f. The Participants entered into a Working Agreement dated July 31, 2012 ("Working Agreement") relating to the procedures for development and operation of a VFPA-led habitat bank for a five (5) year trial period which was extended by the Participants to March 31, 2019;
- g. VFPA has undertaken several habitat creation and enhancement projects in consultation with DFO pursuant to the Working Agreement, which are included in Annex E ("Existing Projects"); and
- h. This Arrangement will replace the Working Agreement and the Existing Projects will be managed pursuant to this Arrangement.

**THEREFORE**, the Participants agree to the following arrangement ("Arrangement").

## **2. PURPOSE**

To support VFPA in fulfilling its mandate (referred to in paragraph e above) by facilitating infrastructure development when habitat credits from the Habitat Bank can be applied to meet future offsetting requirements for such development.

To replace the Working Agreement with this Arrangement and to establish revised principles for the continuation and management of the Habitat Bank by:

- establishing a working relationship between the Participants based on trust, accountability and information sharing;
- establishing a clear understandable Arrangement for managing the Habitat Bank; and
- increasing certainty in the administration of the Habitat Bank.

## **3. OTHER GENERAL INFORMATION**

The activities carried out under this Arrangement will be consistent with:

- *Fisheries Protection Policy Statement* (2013);
- *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting* (2013);
- *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October, 2016);
- any relevant Species at Risk Recovery Strategies and management considerations; and
- any relevant Fisheries Management Objectives.

#### **4. SCOPE**

The scope of this Arrangement is limited to the continuation and administration of the Habitat Bank described in Annex A, and including Habitat Banking Projects proposed in accordance with Annex B and the Existing Projects (described in Annex E). For the purposes of this Arrangement, a "Habitat Banking Project" shall mean a "conservation project" as defined in *Fisheries Protection Program's Interim Guide to Proponent-led Habitat Banking* (October, 2016).

#### **5. ROLES AND RESPONSIBILITIES**

The roles and responsibilities of the VFPA are:

- Jointly managing the performance of the Arrangement with DFO;
- Identifying, designing, constructing, monitoring, maintaining, and protecting Habitat Banking Project sites;
- Meeting all other applicable federal, territorial, provincial and municipal requirements that apply to Habitat Banking Projects;
- Reporting on performance of Habitat Banking Projects;
- Accurately maintaining a copy of the habitat credit ledger; and
- Preparing and submitting Progress Reports for the Arrangement.

The roles and responsibilities of DFO are:

- Jointly managing the performance of the Arrangement with VFPA;
- Reviewing, providing advice and confirming Habitat Banking Project proposals;
- Reviewing Progress Reports, validating habitat credit balances in the habitat credit ledger, and processing habitat credit ledger transactions;
- Verifying the reported results of Habitat Banking Project performance in the Progress Reports;
- When appropriate, carrying out direct monitoring (i.e., a site visit to gather and analyse samples or information in order to directly verify compliance and effectiveness) and/or carrying out indirect monitoring (i.e., an assessment of information provided in Progress Reports to verify compliance and effectiveness) of Habitat Banking Project sites; and
- Reviewing and processing Progress Reports of the Arrangement.

The Participants shall fulfill their responsibilities under this Arrangement in accordance with the provisions of federal, provincial and territorial laws and regulations that govern their activities. Should a Participant not be able to perform a function under this Arrangement, the affected Participant will immediately contact the other signatories of this Arrangement so that early resolution can be reached.

## **6. MANAGEMENT PROVISIONS**

This Arrangement establishes the following management provisions for the administration of the Habitat Bank:

- The accountability lies with the office of signatories of the Arrangement: Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.
- The day to day administration of the Arrangement will be carried out by: Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region.

## **7. ADMINISTRATION OF THE HABITAT BANK ARRANGEMENT**

- Specific details related to the principles of the administration and operation of the Habitat Bank are included in Annex A;
- Habitat Banking Projects that are proposed for development are to be submitted for review and confirmation by DFO using the "Project Confirmation" template set out in Annex B;
- Habitat credits held within the Habitat Bank shall be tracked using the "Habitat Credit Ledger" template and frequency set out in and described in Annex C;
- Progress Reports shall be prepared and submitted annually in accordance with the requirements of Annex D;
- Existing Projects that were either constructed or proposed for construction under the terms of the Working Agreement are identified in Annex E; and
- Indigenous consultation and engagement related to the use of habitat credits is described in Annex F.

## **8. SHARING OF INFORMATION**

While this Arrangement is in effect and at all times thereafter, each of DFO and VFPA and any officers, employees or agents of each of them shall treat all information, data, documents, reports and materials acquired or to which access have been given in the course of, or incidental to, the performance of this Arrangement as confidential, subject to the federal *Access to Information Act* and the *Privacy Act*. With the exception of the Arrangement, the annexes to the Arrangement and annual Progress Reports, which VFPA may disclose from time to time, the Participants shall not disclose or permit to be disclosed such information, data, documents, reports and materials, unless:

- the Participants agree to the disclosure;
- the disclosure is part of the application and review process of VFPA's Project and Environmental Review for a proposed Habitat Banking Project, which would include disclosure of project-specific information, engagement information for

public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;

- the disclosure is part of the application and review process by DFO for a proposed development project that would utilize habitat banking credits as offsetting, which would include disclosure of project-specific information, engagement information for public/stakeholder and Indigenous groups and technical content, and the posting of on-line information;
- the disclosure is part of an application and review process of other regulatory agencies (such as Environment and Climate Change Canada for Disposal at Sea permit or exemption) for a proposed Habitat Banking Project, which would include disclosure only as required by such agencies;
- the disclosure relates to consultation and engagement with Indigenous groups as part of the Indigenous Consultation and Engagement Process set out in Annex G;
- the disclosure is to a third party as part of the Habitat Bank Administration as described in Annex A;
- the disclosure is required by law;
- the information was obtained from the public; or
- the information is available to the public.

## **9. CONSULTATION AND ENGAGEMENT**

The Participants will collaborate on an approach to meaningfully engage and consult with Indigenous groups having regard to the process being undertaken by VFPA's Habitat Enhancement Program for the development of Habitat Banking Projects and the involvement of Indigenous groups that is described in Annex G.

## **10. DIFFERENCES IN INTERPRETATION AND APPLICATION**

The Participants will endeavor to resolve issues regarding the implementation of this Arrangement in a timely manner using mechanisms available to the Participants. Where an issue remains unresolved, the pre-eminent jurisdiction responsible for the matter under consideration will make the final determination and seek concurrence from Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region.

## **11. PROGRESS REPORTS**

The VFPA will prepare progress reports using the form described in Annex D ("Progress Report") on the achievements and challenges encountered during the reporting period of this Arrangement as it relates to the purposes identified in section 2 of this Arrangement.

The Progress Report should be submitted within ninety (90) calendar days from the conclusion of each year. A year will be considered to run from January 1 to December 31.

The Progress Report will be submitted to the Office of signatories of the Arrangement, Director, Container Terminal Construction, Vancouver Fraser Port Authority and Regional Director, Ecosystems Management, DFO Pacific Region, for their concurrence.

All Progress Reports will conform to the requirements set out in Annex D.

## **12. REVIEW**

At the end of each five (5) year period during which this Arrangement is in effect, the Regional Director, Ecosystems Management, DFO Pacific Region, may establish a review team consisting of Manager, Infrastructure Habitat Development, Vancouver Fraser Port Authority and Manager, Integrated Planning, Fish and Fish Habitat Protection Program, DFO Pacific Region, or an appropriately qualified and mutually agreed to third party to review the effectiveness of activities under this Arrangement. This review team will report to the Regional Director, Ecosystems Management, DFO Pacific Region, within six (6) months of being established.

## **13. AMENDMENT**

The Arrangement may be amended at any time in writing and by mutual consent of the Participants. An amendment will be confirmed by an exchange of letters, signed by the Participants, setting out the amendment and its effective date.

## **14. FINANCIAL ARRANGEMENT**

This Arrangement will not impose any additional financial responsibilities on the Participants, except that each Participant will be responsible for the staff and funding costs it incurs in its own interests, related to the support of the Arrangement.

## **15. DURATION, WITHDRAWAL AND TERMINATION**

This Arrangement is in effect from the date first written above for a period of fifteen (15) years. VFPA can request renewal of the Arrangement for an additional defined term (of no less than five (5) years) by providing one year's written notice to the other Participant. If this Arrangement is not renewed at the expiration of the term or a renewal, and provided that VFPA is not in breach of this Arrangement, the Participants will continue to apply the terms of this Arrangement to all Habitat Banking Projects that are either deposited in the Habitat Bank or have been confirmed by DFO in accordance with Annex B.

## **16. LEGAL DISCLAIMER**

This Arrangement is an expression of the mutual intentions of the Participants and is not legally binding or enforceable against them.



## **17. NOTICE**

All notices to be given under this Arrangement shall be in writing and shall be sent by prepaid registered mail or electronic transmission addressed to the Party entitled to receive the same, or delivered to such party as follows:

- if to VFPA:

Vancouver Fraser Port Authority (VFPA)  
100 The Pointe  
999 Canada Place  
Vancouver, British Columbia  
V6C 3T4

Attention: Director, Container Terminal Construction  
E-mail:

with a copy to:

Attention: Director, Legal Services  
E-mail:

- if to DFO:

Fisheries and Oceans Canada (DFO)  
Pacific Region, Ecosystems Management Branch  
Suite 200 – 401 Burrard Street  
Vancouver, BC  
V6C 3S4

Attention: Regional Director  
E-mail:

## **18. GENERAL**

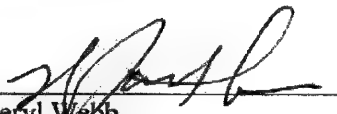
VFPA is entering into this Arrangement on its own behalf and not as agent of Her Majesty in Right of Canada.

## EFFECTIVE DATE AND SIGNATURE

This Arrangement has been signed by the Regional Director of DFO Pacific Region of Fisheries and Oceans on behalf of Her Majesty the Queen in Right of Canada and by the VFPA on the dates noted below.

SIGNED IN THE PRESENCE OF:

FOR HER MAJESTY THE QUEEN IN RIGHT OF CANADA

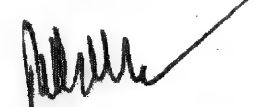
*for*   
Cheryl Webb  
Regional Director  
Ecosystems Management  
DFO Pacific Region

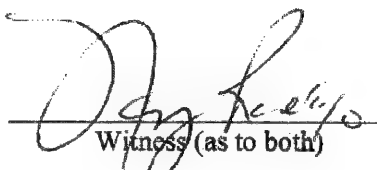
  
Witness


**MAR 29 2019**

Date

FOR VANCOUVER FRASER PORT AUTHORITY

  
Robin Silvester  
President and CEO

  
Witness (as to both)

  
Mark Gustafson  
Corporate Secretary

**MAR 26 2019**


Date

This Arrangement comes into effect on the date that both Participants have signed above.

## **ANNEX A**

### **HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK**

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<b>ANNEX A:</b>  <b>HABITAT BANK DESCRIPTION AND THE PRINCIPLES FOR THE MANAGEMENT OF THE PORT OF VANCOUVER HABITAT BANK</b>	
<b>Information Required</b>	<b>Description</b>
<b>Habitat Bank Location ("Service Area")</b>	<p>The Service Area of the Habitat Bank will include Habitat Banking Projects situated geographically within the lands and waters managed by VFPA and within the navigational jurisdiction of VFPA pursuant to its Letters Patent, as amended from time to time. The Service Area includes the Fraser River Estuary and its tributaries, Burrard Inlet, the Strait of Georgia and its associated inlets (See Figure 1.0 below) and will include other areas as established from time to time as mutually agreed to by the Participants.</p> <p>Figure 1.0 Service Area of the Habitat Bank</p>  <p>The map shows the geographical area covered by the Habitat Bank's Service Area. It includes the Fraser River Estuary, Burrard Inlet, and the Strait of Georgia, along with their associated inlets. The map is a grayscale image with a white background and dark gray outlines representing the water bodies and landmasses. A small black rectangle is visible in the upper right corner of the map area.</p>
<b>Habitat Bank Administration</b>	<p>The Habitat Bank is a long-term initiative, comprised of Habitat Banking Projects, that is used to proactively create, restore or enhance fish habitat to benefit fish and wildlife species. Consistent with VFPA's mandate, this enables VFPA to balance future infrastructure development opportunities with a healthy environment.</p> <p><u>Site Selection:</u> Habitat Banking Projects for the Habitat Bank will generally be selected based on the following considerations and criteria:</p>

	<p>(a) <u>Need</u>: Locations characterized by low productive capacity for species and stocks of interest or species at risk will be considered as a priority for the Habitat Bank. The intent is to develop or improve habitat capacity in the Service Area where habitat is needed and in support of applicable DFO policies.</p> <p>(b) <u>Habitat Productivity</u>: Emphasis will be placed on creation of high value habitat types that support a large number of ecological services and species functions (e.g., eelgrass beds and low marshes). The value of productivity will be assessed in the context of "need" (see (a) above).</p> <p>(c) <u>Site location</u>: Sites for the Habitat Bank will be selected based on their proximity to potential development areas with significant or rare ecological habitats or where onsite habitat compensation opportunities may be limited.</p> <p>(d) <u>Feasibility and cost</u>: Coastal zone processes, river hydraulics, biological productivity and ecological functioning are amongst the factors that will be used to determine the feasibility of habitat creation. In some areas it may not be possible to achieve stable self-functioning habitat due to ongoing influences of physical processes. Further, some habitat creation options may be possible but only at extreme high cost. Consideration may be given if these habitat types are critical for endangered or threatened species and the habitat credit applied to the Habitat Bank recognizes the increased cost of development.</p> <p>Through regular liaison meetings between DFO and VFPA representatives, potential Habitat Banking Projects will be identified and discussed.</p> <p>DFO's confirmation of the appropriateness of a proposed Habitat Banking Project for inclusion in the Habitat Bank will be achieved through submitting the project for review and confirmation by DFO using the "Project Confirmation" template set out in Annex B.</p> <p><u>Habitat Credits</u>:</p> <p>Habitat credit valuation will be established specifically for each Habitat Banking Project. This valuation will include the unit of measure and the value of the credits to be deposited in the Habitat Bank. A description of the approach and the analysis performed will be included in the preparation of the "Project Confirmation" using the template set out in Annex B.</p> <p>Habitat Banking Projects will be recorded as a deposit into the Habitat Bank on the Habitat Credit Ledger upon completion of construction of the Habitat Banking Project using the template set out in Annex C.</p>
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
	<p>The actual productive value of a particular Habitat Banking Project will be determined immediately prior to its proposed use as credit to offset a development project.</p> <p>VFPA shall, either through ownership, lease, licence or other agreement, ensure that a Habitat Banking Project site is protected at least until the withdrawal of the habitat credits from the Bank that are associated with the Habitat Banking Project site.</p> <p><u>Third Parties:</u></p> <p>VFPA may develop Habitat Banking Projects for inclusion in the Habitat Bank in collaboration with third parties. Once included in the Habitat Bank, such Habitat Banking Projects will be treated in the same manner as other Habitat Banking Projects that have been placed into the Habitat Bank.</p> <p>VFPA may enter into agreements with third parties to allow withdrawal of habitat credits, as defined by this Arrangement, when such an agreement facilitates development activities that support VFPA in fulfilling its mandate.</p>
<b>Bank Establishment Date</b>	<p>July 31, 2012 for a five (5) year trial period under the terms of the Working Agreement, which was executed on September 10, 2012, and which was extended by the Participants to March 31, 2019, and which was replaced by this Arrangement for a term of fifteen (15) years from the date this Arrangement comes into effect.</p>

## **ANNEX B**

### **FORM OF PROJECT CONFIRMATION**

The following document template (titled Project Confirmation) will be used to identify and confirm that a proposed Habitat Banking Project is appropriate and confirmed for development and deposit in the Habitat Bank.

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 <b>PORT of vancouver</b> <b>Habitat Enhancement Program</b>	 <b>Fisheries and Oceans Canada</b> <b>Pêches et Océans Canada</b> <b><u>Project Confirmation</u></b>
<b>PROJECT NAME:</b>	

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### Terminology used:

- "Arrangement" refers to the arrangement between Fisheries and Oceans Canada and Vancouver Fraser Port Authority for the management and administration of the Vancouver Fraser Port Authority Habitat Bank
- "DFO" refers to Fisheries and Oceans Canada
- "FPIP" refers to *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting (2013)*
- "VFPA" refers to Vancouver Fraser Port Authority
- "Project" refers to the proposed \_\_\_\_\_
- "QEP" refers to a Qualified Environmental Professional

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### Preamble:

In accordance with the Arrangement, this Project Confirmation will be used to confirm that:

- VFPA consulted and negotiated with DFO on the suitability of the above-referenced Project for habitat banking purposes.
- DFO agrees, in principle, that the above-referenced Project would be acceptable as fish habitat as identified herein.
- DFO agrees that the identified type of fish habitat and the approximate quantity of fish habitat would be suitable for habitat banking.
- The Project meets the terms of the Arrangement with regard to need, fish habitat, productivity, site location, feasibility/cost, and ownership/tenure.
- DFO acknowledges that VFPA has developed the project concept and will move to final design as identified in the attached drawings.

*This Project Confirmation is used to support the conditions and requirements of the Arrangement and does not alter or modify the Arrangement in any manner. This Project Confirmation will also be used to confirm that the Project, if constructed as proposed, meets the objectives of the FPIP. An assisted assessment has determined that a DFO regulatory review pursuant to the Fisheries Act is not required for the Project. This assessment was conducted by a QEP in accordance with guidance from DFO's Projects Near Water web site and DFO's "Science Advice for Managing Risk and Uncertainty in Operational Decisions of the Fisheries Protection Program" (2014). As would be expected for a viable habitat enhancement opportunity, this assessment concluded that the Project will not result in Serious Harm to fish that contribute to commercial, recreational or Aboriginal (CRA) fisheries.*

*As the Project proceeds, VFPA will maintain responsibility to ensure that the Project has undergone appropriate reviews and assessments, including those mandated by applicable environmental assessment legislation (e.g., Species at Risk Act, if applicable) and any other VFPA-mandated reviews and assessments.*

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<b>Project Overview:</b>	
<ul style="list-style-type: none"> <li>• Description of the proposed project and how the proposed project will result in the creation of fish habitat that will provide long-term benefits for targeted species of fish such as salmon, aquatic species at risk or other species that may utilize the project area.</li> <li>• Description and valuation of the ecological functions that the proposed project will include.</li> <li>• Brief description of the proposed construction activities, including how they will be undertaken to avoid and mitigate any impacts to fish and fish habitat.</li> <li>• Brief description of the proposed timing for project completion, including post-construction monitoring.</li> </ul>	
Water feature name:	
<b>Location of Works</b>	
Regional district/ land use authority:	
City/municipality:	
Lat./Long.	
Property ownership:	
<b>Description of Pre-Construction Values</b>	
<ul style="list-style-type: none"> <li>• Description of pre-construction habitat values and conditions, including biophysical attributes</li> <li>• Description of pre-construction use of the area, including site history as appropriate</li> </ul>	
<b>Description of Proposed Activities</b>	
<ul style="list-style-type: none"> <li>• Detailed description of construction activities and design approach</li> <li>• Includes attachment of design drawings, and proposed habitat area for construction</li> <li>• Description of construction methodology and detailed mitigation measures</li> </ul>	
Overall work schedule:	
Least risk work window:	
<b>Potential Habitat Gains and Anticipated Affected Areas</b>	

- *Description of habitat gains, and anticipated affected habitat, table format*

Habitat Type	Potential Habitat Gain (m <sup>2</sup> )	Anticipated Affected Habitat (m <sup>2</sup> )	Comments
<i>X Habitat Type</i>			
<b>Habitat Gains and Affected Habitat</b>			

### **Fish Productivity Investment Policy Considerations**

- *Description and high-level summary of how the proposed project is expected to comply with FPIP objectives, based on project characteristics, ecology of relevant fisheries species, fisheries management objectives, and any local restoration priorities.*
- *This includes a review of readily available online information including DFO fisheries management plans and other documents as required*
- *Description and rationale for how the proposed project meets the following 4 Principles of the FPIP:*
  - **Principle 1:** *Offsetting measures must support fisheries management objectives or local restoration priorities.*
    - *Rationale:*
  - **Principle 2:** *Benefits from offsetting measures must balance Project impacts.*
    - *Rationale:*
  - **Principle 3:** *Offsetting measures must provide additional benefits to the fishery.*
    - *Rationale:*
  - **Principle 4:** *Offsetting measures must generate self-sustaining benefits over the long-term.*
    - *Rationale:*

### **Post Construction Monitoring Plan**

- *An as-built survey will be provided to document and confirm the size of the created habitat, following construction.*
- *VFPA will ensure that post-construction monitoring is undertaken in accordance with standard DFO requirements to confirm that created fish habitats are functioning as intended.*
- *A Post-Construction Monitoring Plan for the Habitat Enhancement Program has been created to outline monitoring requirements for habitat banking project sites.*
- *Monitoring will include assessments of site stability, proper physical function, planting success, and achievement of the desired biological objectives.*
- *VFPA to provide an estimate of predicted time for the vegetation at the site to become well established*

Attachments	
• <i>Design Drawings (attachment)</i>	
<p>Signed on behalf of Vancouver Fraser Port Authority:</p>  <hr/> <p>Habitat Enhancement Program Vancouver Fraser Port Authority</p>	<p>Date: _____</p>

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## **ANNEX C**

### **HABITAT CREDIT LEDGER**

The following template shall be used to record and track the credits associated with each Habitat Banking Project that has been deposited in the Habitat Bank. The completed Habitat Credit Ledger will be submitted to DFO at the following frequency:

- with each Annual Report; and
- following a transaction in the Habitat Bank (withdrawal or deposit of credits).

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## **ANNEX D**

### **FORM OF PROGRESS REPORTS**

The following reports will be used to document and communicate the status of the Habitat Bank on an annual basis:

- Annual Report for VFPA's Habitat Bank; and
- Annual Habitat Monitoring Report for VFPA's Habitat Bank.

Each report will be submitted to DFO on annual basis and shall include the detail as provided in the following Outline of Content.

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<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<b><u>SECTION</u></b>	<b><u>CONTENT</u></b>
<b>1. Table of Contents</b>	
<b>2. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>3. Executive Summary</b>	<ul style="list-style-type: none"> <li>• Identification of purpose of Annual Report</li> <li>• Statement of commitment between Participants for a working relationship built on trust, accountability and information sharing</li> <li>• Overview of annual transactions and current credits</li> </ul>
<b>4. Introduction</b>	<ul style="list-style-type: none"> <li>• Background on the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>5. Administration of the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Tracking processes and responsibilities</li> <li>• Activities started/completed in Reporting Period</li> <li>• Annual Review</li> <li>• VFPA and DFO Liaison Activities</li> <li>• Achievements in Reporting Period</li> </ul>
<b>6. Credits in the Habitat Bank</b>	<ul style="list-style-type: none"> <li>• Summary of the credits in the Habitat Bank and the transaction that were performed in the reporting year</li> </ul>
<b>7. General Ledger</b>	<ul style="list-style-type: none"> <li>• Overview of the General Ledger</li> </ul>
<b>8. Habitat Balance Sheet</b>	<ul style="list-style-type: none"> <li>• Overview of the Habitat Balance Sheet</li> </ul>
<b>9. Anticipated Program for 20XX [Next Year]</b>	<ul style="list-style-type: none"> <li>• Projects Currently under Construction</li> <li>• Priority Projects for 20XX</li> </ul>
<b>10. Management Issues and Opportunities</b>	<ul style="list-style-type: none"> <li>• Challenges and issues encountered</li> <li>• Obstacles</li> <li>• Potential remedial measures for implementation next year</li> </ul>
<b>11. Indigenous Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of Indigenous engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>

<b><u>ANNUAL REPORT FOR VFPA'S HABITAT BANK</u></b>	
– Outline of Content	
<b><u>SECTION</u></b>	<b><u>CONTENT</u></b>
<b>12. Public and Key Stakeholder Engagement Activities</b>	<ul style="list-style-type: none"> <li>• Summary of public and key stakeholder engagement activities performed within the reporting year on Habitat Banking Projects</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Summary of VFPA and DFO Meetings in the Reporting Year
Appendix B	As-Built Reports
Appendix C	Credit Transaction Reports
Appendix D	Map of Sites in the Habitat Bank
Appendix E	General Ledger
Appendix F	Habitat Balance Sheet
Appendix G	Map of Sites Proposed for Next Year



<b><u>ANNUAL HABITAT MONITORING REPORT FOR VFPA'S HABITAT BANK</u></b>	
<b>– Outline of Content</b>	
<b><u>SECTION</u></b>	<b><u>CONTENT</u></b>
<b>1. Terminology Used</b>	<ul style="list-style-type: none"> <li>• Descriptions of terminology used in the report</li> </ul>
<b>2. Introduction</b>	<ul style="list-style-type: none"> <li>• Background of the Habitat Bank</li> <li>• Acknowledgement of reporting requirements under the terms of the Arrangement</li> </ul>
<b>3. Types of Monitoring</b>	<ul style="list-style-type: none"> <li>• Description of the various types of monitoring that is used for the administration of the Habitat Bank</li> </ul>
<b>4. 20XX Monitoring Results</b>	<ul style="list-style-type: none"> <li>• Overview of monitoring results for each Habitat Banking Project (Detailed reports are included in Appendix A)</li> </ul>
<b>5. Next Year's Habitat Monitoring Report</b>	<ul style="list-style-type: none"> <li>• Overview of next year's anticipated habitat monitoring</li> </ul>
<b><u>Appendices</u></b>	
Appendix A	Habitat Banking Project Monitoring Reports
Appendix B	Monitoring Status and Proposed Monitoring Schedule

## **ANNEX E**

### **EXISTING PROJECTS**

The Habitat Banking Projects that are identified herein represent the status of the Habitat Bank and projects planned for the Habitat Bank as of the Effective Date of this Arrangement.

Table 1 – Habitat Banking Projects currently deposited in the Habitat Bank

Table 2 – Habitat Banking Projects that have been proposed by VFPA and accepted by DFO as appropriate for development and deposit into the Habitat Bank

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**Table 1.0 – Habitat Banking Projects Deposited to VFPA Habitat Bank**

No.	SITE	LOCATION	BANKED AREA (m <sup>2</sup> )	STATUS
1.	Salt Marsh Restoration – TFN (3.1 & 3.2)	Delta (Tsawwassen)	6,635 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
2.	Salt Marsh Restoration - Boundary Bay (3.3, 3.4 & 3.5)	Delta (Boundary Bay)	56,357 m <sup>2</sup> (salt marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
3.	Glenrose Tidal Marsh	Delta	10,778 m <sup>2</sup> (tidal freshwater marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
4.	Riverfront Park Tidal Marsh	Vancouver	1,481 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
5.	Gladstone Park Tidal Marsh	Vancouver	3,181 m <sup>2</sup> (brackish marsh)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
6.	Timberland Basin Habitat	Surrey	1,146 m <sup>2</sup> / 2,777 m <sup>2</sup> (tidal freshwater marsh / tidal freshwater mudflat)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>
7.	New Brighton Park Shoreline Habitat Restoration Project	Vancouver	9,872 m <sup>2</sup> (salt marsh, marine tidal channel & mudflat, cobble/boulder beach, and marine riparian)	<ul style="list-style-type: none"> <li>• Work is complete</li> <li>• Monitoring is in progress</li> </ul>

**Table 2.0 – Habitat Banking Projects Proposed by VFPA and accepted by DFO as appropriate for the Habitat Bank**

No.	SITE	LOCATION	APPROX. GROSS AREA (ha.)	STATUS
1.	Cates Landing Habitat Restoration	North Vancouver	~1.0 ha	• Complete
2.	Maplewood Marine Restoration Project	North Vancouver	~7.0 ha	• Permitting and approvals in progress
3.	Tsawwassen Eelgrass Project	Delta	~4.3 ha	• Permitting and approvals in progress
4.	South Arm Jetty Tidal Marsh Project	Richmond	~44.0 ha	• Permitting and approvals in progress
5.	Westham Island / Canoe Pass Tidal Marsh Project	Ladner	~4.0 ha	• Permitting and approvals in progress
6.	McDonald Tidal Marsh Project	Richmond	~2.8 ha	• Permitting and approvals in progress
7.	Point Grey Tidal Marsh Project	Vancouver	~41.0 ha	• To be advanced in future years
8.	Steveston Island Tidal Marsh Project	Richmond (Steveston)	~6.5 ha	• To be advanced in future years

## **ANNEX F**

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: USE OF HABITAT CREDITS TO MEET OFFSETTING REQUIREMENTS OF A *FISHERIES ACT* AUTHORIZATION**

Consultation with Indigenous peoples is required when Fisheries and Oceans Canada (DFO) makes a regulatory decision that may adversely impact potential or established Aboriginal or treaty rights, Indigenous groups and their related interests. Under the fisheries protection provisions of the *Fisheries Act*, a regulatory decision occurs when DFO contemplates the decision to authorize a work, undertaking or activity under section 35(2)(b) of the *Fisheries Act*. Indigenous consultation will normally take place after DFO has received an Application for Authorization and determined that the information requirements set out in the *Applications for Authorization* under Paragraph 35(2)(b) of the *Fisheries Act Regulations* have been met.

DFO will consult on the work, undertaking or activity being authorized under section 35(2)(b) of the *Fisheries Act* and any other aspects of the Authorization that have the potential to adversely impact potential or established Aboriginal or treaty rights, and related interests. The goal of these consultations will be to identify measures to avoid, minimise, or if required accommodate for, potential impacts of the work, undertaking or activity on the rights or interests of Indigenous peoples through mitigation and offsetting to be incorporated into the Authorization.

As the purpose of utilizing habitat banking credits is to meet offsetting requirements of an Authorization issued under section 35(2)(b) of the *Fisheries Act*, the proposed use of habitat banking credits is subject to Indigenous consultation.

## **ANNEX G**

### **INDIGENOUS CONSULTATION AND ENGAGEMENT: HABITAT BANKING PROJECT DEVELOPMENT BY HEP**

#### **Overview and Purpose**

Indigenous consultation and engagement is a key element for the successful delivery of Habitat Banking Projects undertaken by VFPA's Habitat Enhancement Program (HEP). This Annex describes the process implemented by HEP for developing Habitat Banking Projects and identifies key points during the process for input and involvement by Indigenous groups. HEP's consultation and engagement with Indigenous groups aims to identify and address project-related impacts, to design and implement appropriate mitigation measures, and to explore opportunities for Indigenous involvement such as participation in field studies and/or employment, training and contracting. Subject to the discretion and direction of applicable regulatory agencies, including VFPA, HEP also aims to undertake consultation with Indigenous groups in accordance with the requirements of regulatory processes that are applicable to the Habitat Banking Project (such as VFPA's Project and Environmental Review Process).

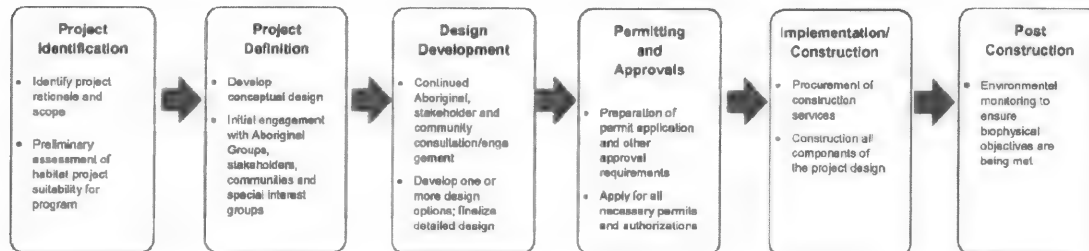
## Habitat Banking Project Development Process

The development of Habitat Banking Projects is achieved through six basic project management phases that are used to guide and control the project from start to finish.

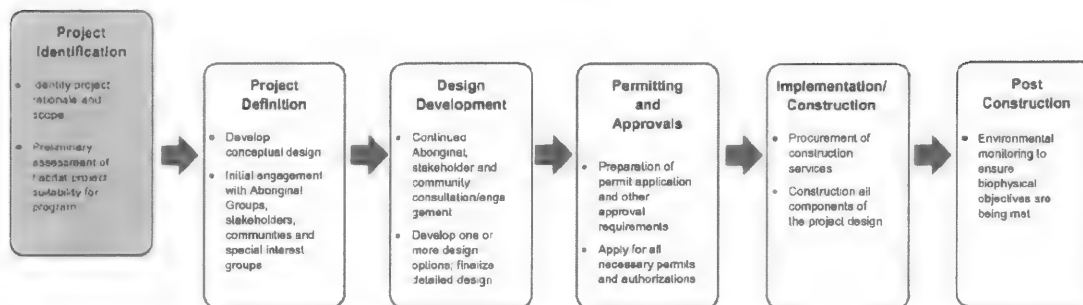
Commencing with the identification of a potential project, the process provides for the structured development and advancement of all required components required for project delivery.

- Phase 1 (**Project Identification**) - The “idea” or the vision of what could be achieved.
- Phase 2 (**Project Definition**) - What are the project objectives? Constraints?
- Phase 3 (**Design Development**) - How will the project objectives be achieved?
- Phase 4 (**Permitting and Approvals**) - Obtaining formal permission to perform the work.
- Phase 5 (**Implementation/Construction**) - Construction of the habitat project.
- Phase 6 (**Post Construction**) - Ensuring long-term success of the habitat project.

The illustration below depicts these six key project management phases and provides the key tasks associated with each.



## Phase 1 - Habitat Banking Project Identification



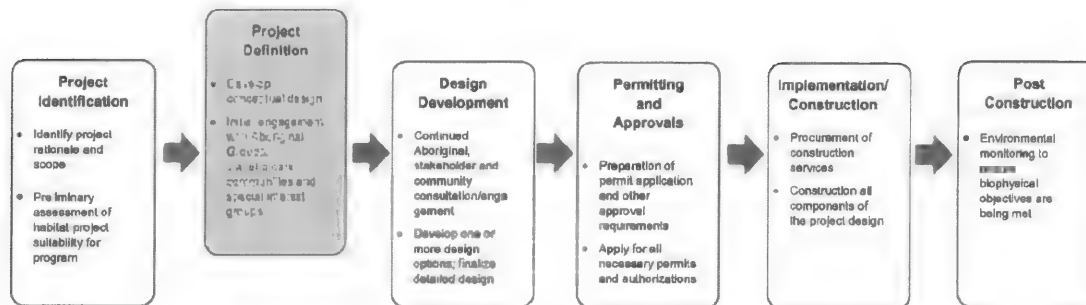
The identification of potential Habitat Banking Projects is a critical component of the project delivery process. Considerations include habitat need, habitat productivity, feasibility, cost, land tenure, DFO confirmation and Indigenous matters.

### Indigenous Consultation and Engagement

- *HEP seeks input from Indigenous groups on identification of potential habitat enhancement sites*
- *HEP seeks input from Indigenous groups on Habitat Banking Projects identified by others*
- *Indigenous groups share available traditional knowledge, information and studies*



## Phase 2 - Habitat Banking Project Definition

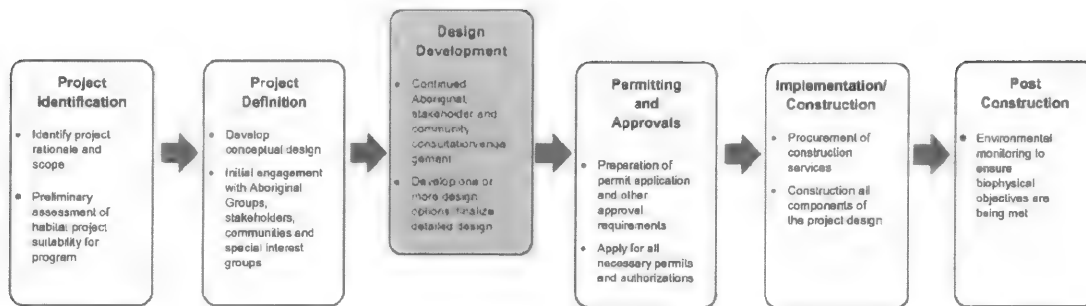


The development of conceptual designs is key in defining what a Habitat Banking Project could include. Using these concept designs, initial engagement and consultation on specific project features can commence.

### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on preferred engagement activities for project (e.g., Aboriginal Technical Design Committee)*
- *HEP consults Indigenous groups on project concept*
- *HEP identifies potential habitat values (i.e., credit estimates) that could be created and engages with interested Indigenous Groups*
- *Indigenous groups share Traditional Knowledge with HEP*
- *HEP identifies opportunity for involving Indigenous groups in field studies and assessments*
- *HEP commences planning for Indigenous involvement throughout project (e.g., contracting, employment and training opportunities)*

### Phase 3 - Design Development

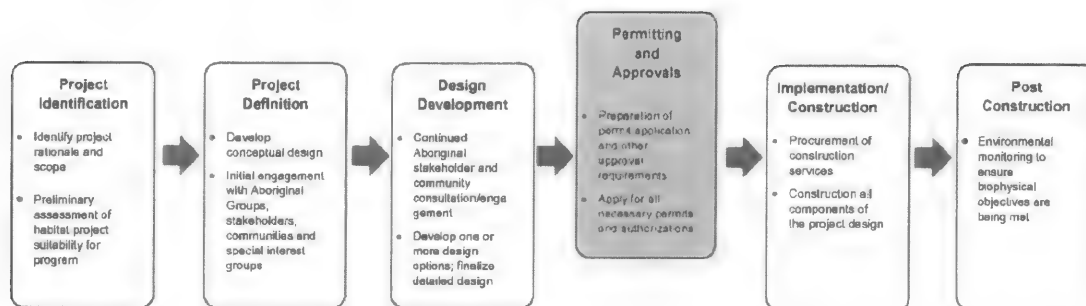


In the design phase, one or more designs are developed and evaluated. Through an iterative design process, a final design is selected and is refined to include all details necessary for construction.

#### Indigenous Consultation and Engagement

- *HEP consults Indigenous groups on the design options*
- *HEP considers Indigenous feedback and refines design of project where appropriate (including selection of plant species)*
- *Where required, HEP undertakes further consultation with Indigenous groups on the design*
- *HEP finalizes the design*
- *HEP shares final design with Indigenous groups*
- *HEP confirms habitat values (i.e., credits) and consults with Indigenous groups*
- *HEP obtains DFO confirmation of appropriateness of habitat project for the Habitat Enhancement Program*
- *HEP plans for continued Indigenous involvement in subsequent phases*

## Phase 4 - Permitting and Approvals

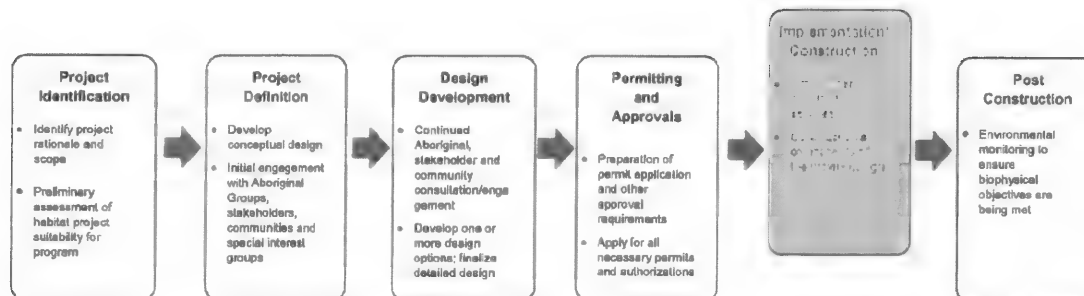


Permits and approvals that are required must be addressed on a project-by-project basis as regulatory requirements and land ownership can vary significantly.

### Indigenous Consultation and Engagement

- *HEP engages with Indigenous groups in relation to permits and approvals*
- *HEP develops a summary of permits and approvals required and shares with Indigenous groups*
- *HEP seeks Indigenous input and support on permit applications*
- *HEP notifies Indigenous groups on submission of permit applications*
- *Regulators and permitting authorities may undertake Indigenous consultation*
- *HEP plans for continued Indigenous involvement in subsequent phases*

## Phase 5 - Implementation/Construction

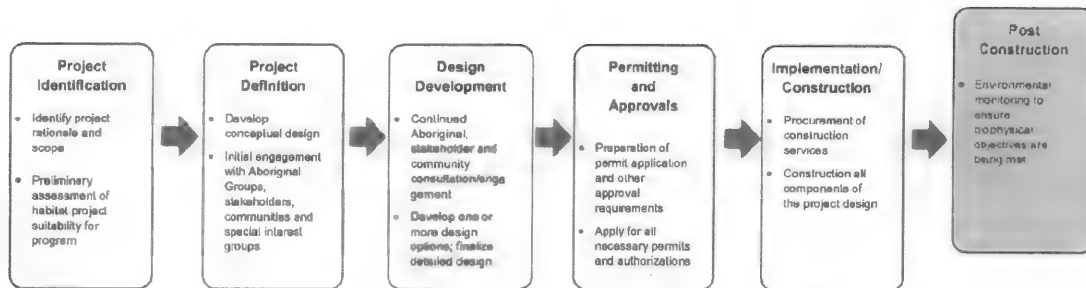


The Habitat Banking Project takes shape during the Implementation/Construction Phase.

### Indigenous Consultation and Engagement

- *HEP identifies approach to procurement and determines opportunities for Indigenous involvement/benefits*
- *HEP monitors conditions of approval/permits and any commitments to Indigenous groups*
- *HEP continues to keep Indigenous groups updated on progress of construction (e.g., sharing of construction monitoring reports)*
- *HEP plans for continued Indigenous involvement in Post Construction Phase*

## Phase 6 - Post Construction



### Indigenous Consultation and Engagement

- *HEP considers opportunities for enhanced integration of Indigenous input and identification of priorities into planning for post construction monitoring*
- *HEP shares Post Construction Monitoring Plan with Indigenous groups*
- *Potential contracting opportunities for Indigenous groups (e.g., maintenance, monitoring)*
- *HEP explores opportunities for enhanced sharing of information (e.g., data collection such as potential DNA analysis, fish use data etc.)*
- *HEP engages Indigenous groups regarding other types of reporting that the HEP can share that communicates project benefits and information of importance to Indigenous communities*



Fisheries and Oceans Canada  
Correspondence Routing Slip

Fiche d'acheminement de correspondance  
Pêches et Océans Canada

UNCLASSIFIED  
GCCMS # : 2019-505-00014  
EKME # : 4030787

To: Cheryl Webb  
Pour:

Date:

Object:  
Objet:

**RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT  
WITH VANCOUVER FRASER PORT AUTHORITY**

MAR 14 2019

From / De: Brad Fanos, Director, Fish and Fish Habitat Protection Program *see memo*

☐

Material for the Minister  
Documents pour le Ministre

☒

Your Signature  
Votre signature

☐

Information

Remarks: This briefing note was developed in consultation with the following  
Remarques: regions/sectors:

Drafting Officer /  
Rédacteur:

BYRON NUTTON (250-756-7221) / Brad Fanos / ck



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Correspondence Routing Slip

Fiche d'acheminement de correspondance  
Pêches et Océans Canada

UNCLASSIFIED  
GCCMS # : 2019-505-00014  
EKME # : 4030787

To: Cheryl Webb  
Pour:

Date:

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**RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT  
WITH VANCOUVER FRASER PORT AUTHORITY**

MAR 14 2019

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EKME # : 4030787

To: Cheryl Webb  
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Date:

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Objet:

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EKME # : 4030787

To: Cheryl Webb  
Pour:

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Object:  
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**RENEWAL OF PROPONENT-LED HABITAT BANK ARRANGEMENT  
WITH VANCOUVER FRASER PORT AUTHORITY**

MAR 14 2019

From / De: Brad Fanos, Director, Fish and Fish Habitat Protection Program *see memo*

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